

وصف مقررات

قسم الاقتصاد الزراعي

للعام الدراسي 2024-2025

( انكليزي )

## Course Description

1. Course Name:	English Language 2																											
2. Course Code:	ENGL 201																											
3. Semester / Year:	2024/2025																											
4. Description Preparation Date:	01/02/2025																											
5. Available Attendance Forms:	Presence + Electronic																											
6. Number of Credit Hours (Total) / Number of Units (Total)	30 Hours 2 Unit																											
7. Course administrator's name (mention all, if more than one name)	Name: A.L. Sarmad Hashim Taha <u>sarmed.almaula@uomosul.edu.iq</u>																											
8. Course Objectives	<p><b>Course Objectives</b></p> <ul style="list-style-type: none"> <li>• To go on studying the English language in special the scientific language</li> <li>• Widening student mind about scientific and literature English vocabularies</li> <li>• Helping the students to think and write in English</li> </ul>																											
9. Teaching and Learning Strategies	Strategy Making use of the electronic available methods alike the auditory or the visual in addition to the white board																											
10. Course Structure	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center; padding: 5px;">Week</th> <th style="text-align: center; padding: 5px;">Hours</th> <th style="text-align: center; padding: 5px;">Required Learning Outcomes</th> <th style="text-align: center; padding: 5px;">Unit or subject name</th> <th style="text-align: center; padding: 5px;">Learning method</th> <th style="text-align: center; padding: 5px;">Evaluation method</th> </tr> </thead> <tbody> <tr> <td style="text-align: center; padding: 5px;">1</td> <td style="text-align: center; padding: 5px;">2hours Presence</td> <td style="text-align: center; padding: 5px;">(A)The student should be able to know the basics of the English language</td> <td style="text-align: center; padding: 5px;">Introduction to Learning English with the new Oxford headway for Pre-Intermediate students+ point of view and mapping the way</td> <td style="text-align: center; padding: 5px;">Electronic lectures, videos, posters and other methods related to learning</td> <td style="text-align: center; padding: 5px;">Exams Reports Discussions quiz</td> </tr> <tr> <td style="text-align: center; padding: 5px;">2</td> <td style="text-align: center; padding: 5px;">2hours Presence</td> <td style="text-align: center; padding: 5px;">(A)The student should be able to know the tenses of the English language</td> <td style="text-align: center; padding: 5px;">Practicing English with "The Great Communicators" + Reading out clearly and learning pronunciation + Vocabulary</td> <td style="text-align: center; padding: 5px;">Electronic lectures, videos, posters and other methods related to learning</td> <td style="text-align: center; padding: 5px;">Exams Reports Discussions quiz</td> </tr> <tr> <td style="text-align: center; padding: 5px;">3</td> <td style="text-align: center; padding: 5px;">2hours Presence</td> <td style="text-align: center; padding: 5px;">(A)The student should be able to</td> <td style="text-align: center; padding: 5px;">Spoken English informal Language</td> <td style="text-align: center; padding: 5px;">Electronic lectures, videos, posters and</td> <td style="text-align: center; padding: 5px;">Exams Reports</td> </tr> </tbody> </table>				Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method	1	2hours Presence	(A)The student should be able to know the basics of the English language	Introduction to Learning English with the new Oxford headway for Pre-Intermediate students+ point of view and mapping the way	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz	2	2hours Presence	(A)The student should be able to know the tenses of the English language	Practicing English with "The Great Communicators" + Reading out clearly and learning pronunciation + Vocabulary	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz	3	2hours Presence	(A)The student should be able to	Spoken English informal Language	Electronic lectures, videos, posters and	Exams Reports
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method																							
1	2hours Presence	(A)The student should be able to know the basics of the English language	Introduction to Learning English with the new Oxford headway for Pre-Intermediate students+ point of view and mapping the way	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz																							
2	2hours Presence	(A)The student should be able to know the tenses of the English language	Practicing English with "The Great Communicators" + Reading out clearly and learning pronunciation + Vocabulary	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz																							
3	2hours Presence	(A)The student should be able to	Spoken English informal Language	Electronic lectures, videos, posters and	Exams Reports																							

		know the rules of the English language	+ conversation with students	other methods related to learning	Discussions quiz
4	2hours Presence	(A)The student should be able to know the basics of the English language	Practicing English with "A Walk with Death" + Reading out clearly and learning pronunciation + Vocabulary	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz
5	2hours Presence	(A)The student should be able to know the basics of the English language	Practicing English with "Flying for a living" + Reading out clearly and learning pronunciation + Vocabulary	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz
6	2hours Presence	(A)The student should be able to know the basics of the English language	Dealing with English in Agriculture within different specialties (reading and pronunciation) Language Focus Part 1 (The Parts of a Plant and their Functions)	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz
7	2hours Presence	(A)The student should be able to know the basics of the English language	Definition of the best ways to study English	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz
8	2hours Presence	(A)The student should be able to know the basics of the English language	Definition of the Best ways to study English	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz
9	2hours Presence	(A) The student should be able to know the basics of the English language	Definition of the Best ways to study English.	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz
10	2hours Presence	(A) The student should be able to know the basics of the English language	Definition of the Best ways to study English	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz
11	2hours Presence	(A) The student should be able to know the basics of the English language	Definition of the Best ways to study English.	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz
12	2hours Presence	(A) The student should be able to know the basics of	Definition of the Best ways to study English.	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions

		the English language	Scientific Tour	related to learning	quiz
13	2hours Presence	(A)The student should be able to know the basics of the English language	Definition of the Best ways to study English	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz
14	2hours Presence	(A)The student should be able to know the basics of the English language	Definition of the Best ways to study English	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz
15	2hours Presence	(B)The student should be able to know the basics of the English language	Definition of the Best ways to study English.	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz

#### 11- Course Evaluation:

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

#### 12- Learning and Teaching Resources:

Required textbooks (curricular books, if any)	
Main references (sources)	Rapid Review of English Grammar 1957
Recommended books and references (scientific journals, reports...)	New Headway - English course English in agriculture 1985 oxford bookworms
Electronic References, Websites	<a href="https://translate.yandex.com/">https://translate.yandex.com/</a> <a href="https://ar.younglish.com/">https://ar.younglish.com/</a> <a href="https://readlang.com/">https://readlang.com/</a> <a href="http://www.reverso.net">www.reverso.net</a> <a href="https://elevenlabs.io/app/home">https://elevenlabs.io/app/home</a> <a href="http://The Library Genesis">/The Library Genesis</a> <a href="http://junkymboks / cole13 / pdfdrive">junkymboks / cole13 / pdfdrive</a>

A.I. Sarmad Hashim Taha

Head of Department  
2nd year faculty @ bsc

Chairperson of the Scientific Committee  
kays Nather Ghazal

## Course Description Form

جامعة الموصل  
كلية الزراعة  
مختبر الحاسوب

1. Course Name:	Computer applications2								
2. Course Code:	COMA203								
3. Semester / Year:	Second semester )Autumn( / 2024-2025								
4. Description Preparation Date:	2024/9/1								
5. Available Attendance Forms:	Integrated								
6. Number of Credit Hours (Total) / Number of Units (Total):	45 working hours/1.5 units								
7. Course administrator's name (mention all, if more than one name)	Name: Ahmed Nazar Hassan Email: ahmadccniit@uomosul.edu.iq								
8. Course Objectives	<p>Course Objectives</p> <ul style="list-style-type: none"><li>• Teaching the student the fundamentals of utilizing a computer and its apps (Word, Excel), as well as expanding his understanding of these tools to apply the methods and steps needed to use them in analyses of agricultural experiments.</li><li>• Enhancing his service program management, helping him to finish tasks and reports, and fixing any grammatical or language faults that crop up.</li><li>• The learner gains the ability to handle various data kinds, print, prepare statistics, and identify pre-made functions, graphs, chart designs, etc. at the same time. The student can thus read, comprehend, and evaluate program outputs and outcomes, including Excel. On the other hand, the availability of Internet connection has made it imperative that students acquire computer skills and knowledge of essential service applications.</li></ul>								
9. Teaching and Learning Strategies	<table border="1"><tr><td>Strategy</td><td>- Interactive lecture</td></tr><tr><td></td><td>- Brainstorming</td></tr><tr><td></td><td>- Dialogue and discussion</td></tr><tr><td>i</td><td>- Field Training</td></tr></table>	Strategy	- Interactive lecture		- Brainstorming		- Dialogue and discussion	i	- Field Training
Strategy	- Interactive lecture								
	- Brainstorming								
	- Dialogue and discussion								
i	- Field Training								

- Practical exercises
- Field project
- Self-education

## 10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3 practical	a1: The student learns about the Word program and the importance of using it in writing reports and reports in terms of explaining the basic elements that make up its windows as well as understanding the function of the launch bar, learning how to create a new document bar and adding text inside it, how to store and retrieve information, and learning how to form letters in the language. Arabic, select text or text. Identify the new and deleted version, and know other features such as the font type and how to change its appearance Attractive.	What is WORD program? The basic elements that make up the rose window	Interactive lecture, brainstorming, dialogue and discussion, assigning tasks and reporting	Evaluation of dialogue and discussion, quick questions, assignment of a report, semester exam 1, and final exam

2	3 practical	a2: Uses numbering, bullets, multi-level lists, indentation, paragraph and line spacing, search and replace methods, and steps for inserting a cover page and a blank page.	Explanation of the command bar for menus	Present interactive, brainstorming, dialogue and discussion
3	3 practical	b1: Applies to inserting a table into the document and converting the text into a table.	Tables and shortcuts in Word	Interactive lecture, brainstorming, dialogue and discussion, assigning tasks and reporting
4	3 practical	c1: Tests inserting charts to display results and hyperlinks, inserting technical text, and making signatures in the document.	Charts, links and technical texts	Interactive lecture, brainstorming, dialogue and discussion
5	3 practical	d1: implements the insertion of caps, the date, how to set up the index, and printing with file types.	Insert, date and print operations	Interactive lecture, brainstorming, dialogue and discussion + scientific visit
6	3 practical	d2: Try inserting an image from the Internet and identifying its patterns.	Processes of inserting an image from the Internet and its patterns	Interactive lecture, brainstorming, dialogue and discussion, assigning tasks and reporting
7	3 practical	b2: Uses structural diagrams, artistic stills, and videos.	Insert diagrams, snapshots and movies	Interactive lecture, brainstorming, dialogue and

				discussion	questions, practical application, semester exam 2, and final exam
8	3 practical	b3: It is used to insert an equation with examples as well as symbols, convert text into columns, and page margins, settings, and attributes.	Header, footer, margins and page settings	Interactive lecture, brainstorming, dialogue and discussion	Short test, final exam, second semester exam assignment, final exam
9	3 practical	a3: identifies the basic elements that make up the Excel window and what the cell is And selection and navigation shortcuts, how to edit rows and columns, and the benefit of the auto-fill box.	An introductory introduction to Excel	Interactive lecture, brainstorming, dialogue and discussion, assigning tasks and reporting	Evaluation of dialogue and discussion, quick questions, practical application, semester exam 2, and final exam
10	3 practical	b4: Experiments with basic mathematical equations and how to include basic functions.	Mathematical equations and basic states	Interactive lecture, brainstorming, dialogue and discussion + scientific visit	Evaluation of dialogue and discussion, assignment of semester exam assignment 2, and final exam
11	3 practical	c2: tests the use of functions in Excel.	Types of basic functions	Interactive lecture, brainstorming, dialogue and discussion	Evaluation of dialogue and discussion, quick questions, practical application, semester exam 2, and final exam
12	3 practical	d3: controls the use of Excel's conditional counting function.	Conditional counting function	Interactive lecture, brainstorming, dialogue and discussion	Short test, final exam, second semester exam assignment, final exam
13	3 practical	b5: Finds or replaces specific data and methods for dealing with worksheets in Excel.	Search, replace and manage worksheets	Interactive lecture, brainstorming, dialogue and discussion, assigning tasks and reporting	Dialogue and discussion evaluation, quick questions, assignment of a 2nd semester exam report, and a final exam
14	3 practical	b6: Benefits from finding quick and reliable ways to deal with a set of data by	Sorting and filtering data	Interactive lecture, brainstorming, dialogue and discussion	Evaluation of dialogue and discussion, short test (Quiz),

		learning methods of sorting and filtering in Excel.			assignment of semester exam assignment 2, and final exam
15	3 practical	b7: Employs inserting a chart, how to print, and page layout in Excel.	Chart and printing	Interactive lecture, brainstorming, dialogue and discussion	Evaluation of dialogue and discussion, quick questions, semester exam 2, and final exam

## 11. Course Evaluation

t	Evaluation methods	Evaluation date (one week)	Grade	Relative weight %
1	Report 1	The first week	1	1
2	Report 2	The thirteenth week	1	1
3	Short test Quiz1	second week	2	2
4	Short test Quiz2	fourth week	2	2
5	Short test Quiz3	the sixth week	2	2
6	Short test Quiz4	The eighth week	2	2
7	Short test Quiz5	The twelfth week	2	2
8	Short test Quiz6	The fourteenth week	2	2
9	Practical application1	the third week	1.5	1.5
10	Practical application2	Seventh week	1.5	1.5
11	Practical application3	Week nine	1.5	1.5
12	Practical application4	Week eleven	1.5	1.5
13	Semester test1	The fifth week	10	10
14	Semester test2	The tenth week	10	10
15	Final practical test	Final semester exams	60	60
	The total		100%	100%

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Basic computer and software skills Prof. Dr. Muhammad Bilal Al-Zoghbi Prof. Dr. Ahmed Al-Sharay'a (University of Jordan)
Main references (sources)	1. Introduction to Computer and Information Systems / L.Long / Forth Edition-Prentice-Hall , 1944. 2.Projects for DOS 6 & Windows 3.1 / Fox , Metzeelaer and Scharpf / Benjamin / Cummings Pub. 1995.

	<b>3. Different websites</b>
Recommended books and references (scientific journals, reports...) Electronic References, Websites	lectures from the university library available to other British universities Numerous scientific websites on the web



Theoretical ... Subject teacher:

Dr. Ahmed Nazar Hassan

Chairman of the Scientific Committee:

Dr. Alaa Mohammed Abdullah

Head of the Department:

Dr. Alaa Mohammed Abdullah

## Course Description

1. Course Title:

Soil fertility and fertilizers

2. Course Code:

SOFF415

3. Semester / Year:

First Autumn Semester / Second Stage / 2024-2025

4. Description Preparation Date:

1/ 9 / 2024

5. Available Forms of Attendance:

Compulsory

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

2Theoretical +3Practical / 3.5 units

7. Course administrator's name (if more than one name):

Name: Lecturer, Amar Younis kashmoola

Name: Assist. Lecturer Marwan Mahmoud Yassen

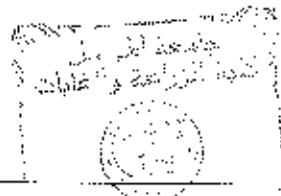
8. Course Objectives:

- The student learns about the methods of taking soil samples and preparing them for chemical analysis and soil fertility evaluation.
- Enable the student to know the concepts of soil fertility and how to evaluate soil fertility and prepare fertilizer recommendation.
- Introducing the student to the methods of detecting different fertilizers and calculating the quantities of added fertilizers and the method and time of their addition.
- Introduce the student to the different physiological functions of these elements and their role in plant growth.
- Enable the student to identify the sources and images of nutrients and the factors that affect their availability.
- Introducing the student to the most important methods of measuring nutrient concentrations in the soil.
- Enable the student to diagnose the symptoms of nutrient deficiency and treat them in the appropriate way and time.

and treat them in the appropriate way and time.

## 9. Teaching and Learning Strategies

- Interactive Lecture
- Brainstorming
- Dialogue and discussion
- Field Training
- Practical exercises
- Field Project
- Self-learning

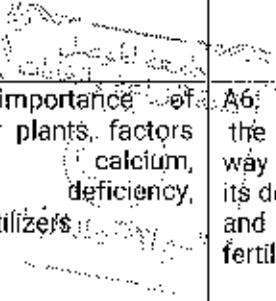


## 10. Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	The week
Semester Exam 1, Final Exam	Interactive lecture, brainstorming, dialogue and discussion, self-learning.	Introduction to the importance of soil fertility, general definitions, the origin and development of science	A1: The student gets to know the importance of soil fertility ,the emergence of soil fertility science and its development	2	Theoretical
Practical quiz1,	Interactive lecture, brainstorming, dialogue and discussion, field training, self-learning.	nitrogen fertilizers, standard specifications, detection of fertilizer, determination of N percentage in manure	B3: The student learns how to detection of urea and ammonium sulfate and estimation of N percentage in fertilizers and their conformity for standard specifications	3 Practical	1
Semester Exam 1, Final Exam	Interactive lecture, brainstorming, dialogue and discussion, self-learning.	Growth and the factors affecting it.	A2: The student learns about growth how to measure it and factors affecting him	2	Theoretical
Home work	Interactive lecture, brainstorming, dialogue and discussion, field training, Practical exercises, self-learning.	phosphate fertilizers, standard specifications, Detection, determination of P ratio in fertilizers	B4: The student can detection Superphosphate and estimation of P the percentage in the fertilizer and its conformity for standard specifications	3 Practical	2
Semester Exam 1, Final Exam	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Quantitative relationships between plant and nutrients. The equations of Mecherlich and Powell, and Bray's theory for the movement of elements	C1: The student is able to express about plant growth Using growth equations different depending on Nutrient determinant for growth	2	Theoretical
Home work	Interactive lecture, brainstorming, dialogue and discussion, field training, self-	Potash fertilizers, standard specifications, Detection, determination of K percentage in fertilizer	B5: The student can fertilizers detection Potash and Appreciation K ratio in fertilizers and its conformity for standard specifications	3 Practical	3

	Learning			
Semester Exam1, Final Exam, Report	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Preliminary foundations and concepts in soil fertility Fertilization, a soil medium for plant growth, qualities Soil and its relationship to nutrient availability, the concept of nutrient availability and divisions Nutrients	C2: The student recognizes the impact of pH and soil exchange capacity on the nutrient availability	2 Theoretical 4
Practical quiz2,	Interactive lecture, brainstorming, dialogue and discussion, field training, Practical exercises, self-learning	Taking soil samples from the field and preparing for chemical analysis	B4: The student gets to know methods of taking the sample and preparing it for chemical analysis	3 Practical
Semester Exam1, Final Exam, Report	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Nitrogen, its importance for the plant, nitrogen in Soil, nitrogen mineralization, influencing factors, symptoms of nitrogen deficiency.	A3: The student gets to know the importance of nitrogen and the way it is absorbed and the symptoms of its deficiency and methods Processed and the most important Nitrogen fertilizers	2 Theoretical 5
Home work	Interactive lecture, brainstorming, dialogue and discussion, field training, Practical exercises, self-learning	Extraction and determination of available nitrogen in the soil	C4: Familiarizes the student extraction and estimation Nitrogen in a way Kjeldal and how to calculate concentration in different units	3 Practical
Quiz 1, Final Quiz	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Phosphorus - its importance to the plant and its transformations, factors affecting the conservation phosphorus in the soil, symptoms of phosphorus deficiency	A4: The student gets to know the importance of phosphorus and the way it is absorbed and its transformations within the plant and the symptoms of its deficiency and methods Processed and the most important Phosphate fertilizers	2 Theoretical 6
Home work	Interactive lecture, brainstorming, dialogue and discussion, field training, Practical exercises, self-learning	Extraction and determination of available phosphorus in the Soil	C6: Familiarizes the student in ways extraction and estimation method available phosphorus and how to calculate conc. in different units	3 Practical
Semester Exam 2, Final Exam, Report	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Potassium, its importance for the plant, and its transformations, factors affecting it, symptoms of potassium deficiency Potassium fertilizers	A5: The student knows the importance of potassium and the way it is absorbed and its transformations within the plant, the symptoms of its deficiency and methods Processed	2 Theoretical 7
Home work	Interactive lecture, brainstorming, dialogue and	Extraction and determination of available potassium in the soil	C7: Familiarizes the student in ways extraction and estimation method available potassium and how to calculations in different units	3 Practical

	learning			
Semester Exam1, Final Exam, Report	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Preliminary foundations and concepts in soil fertility Fertilization, a soil medium for plant growth, qualities Soil and its relationship to nutrient availability, the concept of nutrient availability and divisions Nutrients	C2: The student recognizes the impact of pH and soil exchange capacity on the nutrient availability	2 Theoretical 4
Practical quiz2,	Interactive lecture, brainstorming, dialogue and discussion, field training, Practical exercises, self-learning	Taking soil samples from the field and preparing for chemical analysis.	B4: The student gets to know methods of taking the sample and preparing it for chemical analysis	3 Practical
Semester Exam1, Final Exam, Report	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Nitrogen, its importance for the plant, nitrogen in Soil, nitrogen mineralization, influencing factors, symptoms of nitrogen deficiency,	A3: The student gets to know the importance of nitrogen and the way it is absorbed and the symptoms of its deficiency and methods Processed and the most important Nitrogen fertilizers	2 Theoretical 5
Home work	Interactive lecture, brainstorming, dialogue and discussion, field training, Practical exercises, self-learning	Extraction and determination of available nitrogen in the soil	C4: Familiarizes the student extraction and estimation Nitrogen in a way Kjeldal and how to calculate concentration in different units	3 Practical
Quiz 1, Final Quiz	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Phosphorus - its importance to the plant and its transformations, factors affecting the conservation phosphorus in the soil, symptoms of phosphorus deficiency.	A4: The student gets to know the importance of phosphorus and the way it is absorbed and its transformations within the plant and the symptoms of its deficiency and methods Processed and the most important Phosphate fertilizers	2 Theoretical 6
Home work	Interactive lecture, brainstorming, dialogue and discussion, field training, Practical exercises, self-learning	Extraction and determination of available phosphorus in the Soil	C6: Familiarizes the student in ways extraction and estimation method available phosphorus and how to calculate conc. in different units	3 Practical
Semester Exam 2, Final Exam, Report	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Potassium, its importance for the plant, and its transformations, factors affecting it, symptoms of potassium deficiency Potassium fertilizers	A5: The student knows the importance of potassium and the way it is absorbed and its transformations within the plant, the symptoms of its deficiency and methods Processed	2 Theoretical 7
Home work	Interactive lecture, brainstorming, dialogue and	Extraction and determination of available potassium in the soil	C7: Familiarizes the student in ways extraction and estimation method available potassium and how to calculations in different units	3 Practical

	discussion, field training, Practical exercises, field project, self-learning			
Semester Exam 2, Final Exam	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Calcium, importance of calcium for plants, factors affecting calcium, symptoms of deficiency, calcium fertilizers	A6: The student gets to know the importance of calcium and the way it is absorbed, the symptoms of its deficiency and methods Processed and the most important Calcium fertilizers	2 Theoretical
Home work	Interactive lecture, brainstorming, dialogue and discussion, field training, Practical exercises, self-learning	Extraction and determination of soluble calcium in soil	C8: The student can estimate soluble calcium with chelating substance	3 Practical
Semester Exam 2, Final Exam	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Magnesium, the importance of magnesium for the plant, factors Affecting, Symptoms Deficiency, fertilizers	A7: The student gets to know the importance of magnesium and the way it is absorbed, the symptoms of its deficiency, methods Processed and the most important Magnesium fertilizers	2 Theoretical
Home work	Interactive lecture, brainstorming, dialogue and discussion, field training, Practical exercises, self-learning	Extraction and determination of magnesium dissolved in soil	C8: The student can estimate Magnesium with chelating substance	3 Practical
Semester Exam 2	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Sulfur, the importance of sulfur for plants, cycle sulfur in the soil, sulfur sources, Symptoms of sulfur deficiency, sulfur fertilizers	A8: The student knows the importance of sulfur and the way it is absorbed and the symptoms of its deficiency and methods Processed and the most important sulfur fertilizers	2 Theoretical
Home work	Interactive lecture, brainstorming, dialogue and discussion, field training, Practical exercises, self-learning	Extraction and determination of available sulfur in the soil	C9: The student knows the method of appreciation available sulfur in a way Turbidity and how to calculate Conc. in different units	3 Practical
Final Exam	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Microelements, iron, zinc, copper, Its importance to the plant, and the symptoms of its deficiency.	A9: The student gets to know the importance of Al-micro nutrient and the symptoms of its deficiency and methods Processed and the most important Fertilizers of micro elements.	2 Theoretical
Home work	Interactive lecture, brainstorming, dialogue and discussion, field	extracting and estimating micro elemental cations - in the soil	C10: The student can estimate micro-Element	3 Practical

	training, Practical exercises, self-learning			
Final Exam	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Microelements manganese and boron and molybdenum, its importance for the plant, the symptoms of its deficiency on the plant	A10: The student gets to know the importance of manganese, boron, molybdenum and Symptoms deficiency and its most important fertilizers	2 Theoretical
Home work	Interactive lecture, brainstorming, dialogue and discussion, field training, Practical exercises, self-learning	Extraction and determination of available boron in the soil by hot water method	C11: The student can estimate Boron using Chromatography method	3 Practical
Final Exam	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Organic matter in the soil	C3: The student learns about the importance of organic matter for soil and plants and the factors affecting their decomposition	2 Theoretical
Home work	Interactive lecture, brainstorming, dialogue and discussion, field training, Practical exercises, self-learning	Measurement of organic matter soil and calculation of C:N	B7: The student gets to know the importance of organic matter For soil, plant and Factors affecting its decomposition	3 Practical
Quiz 2, Final Quiz, Report	Interactive lecture, brainstorming, dialogue and discussion, field training, Practical exercises, self-learning	The student is familiar with the types of aquaculture farms, their design methods, their advantages and disadvantages	B1: The student learns about hydroponic farms	2 Theoretical
Practical quiz3	Interactive lecture, brainstorming, dialogue and discussion, field training, Practical exercises, self-learning	Preparing nutritional solutions In hydroponic farms	B8: The student can prepare Nutrient solution	3 Practical
Quiz 3, Final Quiz	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Soil Fertility Assessment	B2: The student is familiar with the methods of evaluation soil	2 Theoretical
Homework	Interactive lecture, brainstorming, dialogue and discussion, field	Soil fertility assessment by its general characteristics	B9: Enabling the student to judge on soil fertility during its general properties	3 Practical

## 11 Course Evaluation

% Relative weight	Grade	Calendar date (week)	Evaluation methods	t
2.5	2.5	Fourth week	Report 1	1
2.5	2.5	Fifth week	Report 2	2
2	2	Sixth week	Quiz (1)	3
2	2	Fourteenth week	Quiz (2)	4
1	1	Fifteenth week	Quiz (3)	5
7.5	7.5	Sixth week	Semester Exam (1)	6
7.5	7.5	The first week is difficult	Semester Exam (2)	7
40	40	Final Semester Exams	Final theoretical test	8
5	5	seven Week	Report3	9
2	2	Fourteenth week	Report4	10
1	1	First week	Practical Quiz (1)	11
0.5	0.5	Fourth week	Practical Quiz (2) Quiz	12
1	1	Fourteenth week	Practical Quiz (3) Quiz	13
5.5	5.5	weeks 14,13,12,11,10,9,8,7,6,5,3	and homework	14
20	20	Final Semester Exams	Final Practical Test	15
%100	% 100	100	Total	

## 12 Learning and Teaching Resources

Fertilizers and soil fertility - Dr. Saad Allah Al-Nuaimi

Required textbooks (methodology, if any)

Soil fertility and fertilization-d.Kazem Mashhool Awad

Main references (sources)

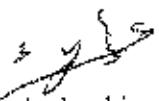
Fertilizer technologies and their uses - d. Noureddine Shawky Ali

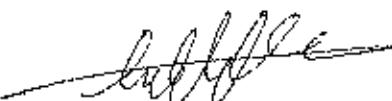
Recommended books and references

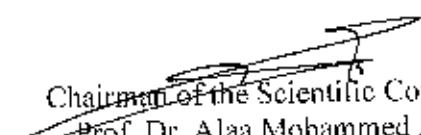
Plant physiology . Doctor Abdul azim Kazem

(scientific journals, reports...)

Electronic References, Websites

  
Theoretical subject lecturer  
Lecturer Amar Younis Kashmoola

  
Practical subject lecturer  
Assist. Lecturer Marwan Mahmoud Yassen

  
Chairman of the Scientific Committee  
Prof. Dr. Alaa Mohammed Abdullah

  
Head of Agricultural Economics Department  
Prof. Dr. Alaa Mohammed Abdullah





## Course Description Form

1. Course Name:	Handling and storage of Horticultural Crops				
2. Course Code:	IISHC405				
3. Semester / Year:	second semester/ second stage/2024-2025				
4. Description Preparation Date:	1/2/2025				
5. Available Attendance Forms:	Attending online				
6. Number of Credit Hours (Total) / Number of Units (Total)	2 Theoretical + 3 Practical / 3.5 units				
7. Course administrator's name (mention all, if more than one name)	<p>Name: Lecturer Dr. Badran Sabhan Abdullah Agha Email: <a href="mailto:Badran.sabhan@uomosul.edu.iq">Badran.sabhan@uomosul.edu.iq</a> Lecturer Dr. Mohand Akeel Ahmed ASSIST. Lecturer Zohor foad</p>				
8. Course Objectives	<ul style="list-style-type: none"><li>The learner will be able to identify the economic and political objectives of horticultural forecasts</li><li>The student learns about the stages of growth and maturity through which horticultural results are achieved</li><li>The team between the different storage groups and the appropriate ones</li><li>Recording the basics of tree growth and using them to acquire emerging fruits for storage</li><li>Training between types of fruits and their divisions, depending on the type of large roles of fruits</li><li>Familiarity with what information the evidence needs to store and what is called for it to master the work</li><li>The student's awareness of the factors affecting the prolongation of the storage life of fruits</li><li>Determine the appropriate type of storage to suit the type of fruits</li><li>A comprehensive study of all types of fruits and how to cover them, and does not include conditions except for periods of storage for a long period of time</li></ul>				
9. Teaching and Learning Strategies	<ul style="list-style-type: none"><li>- Interactive lecture</li><li>- Brainstorming</li><li>- Dialogue and discussion</li><li>- Field Training</li><li>- Practical exercises</li><li>- Field project</li><li>- Self-education</li></ul>				
10. Course Structure	Week	Hours	Required Learning Outcomes	Unit or subject	Learning Evaluation

			<b>name</b>	<b>method</b>	<b>n method</b>
1	2 Theoretical	A1: The student acquires knowledge and concepts related to the importance of food storage for agricultural and horticultural products  B1: He possesses the practical and mental knowledge and concepts that help him in how to conduct good storage of fruits  d1: Community members participate and work to educate them about the importance of increasing and storing agricultural products and the impact this has on society  E1: Contributes to enhancing the values of stored agricultural products among community members and educating them about the importance of storing agricultural products to ensure they remain for the longest possible period in the market.	The importance of storage and the amount of loss in horticultural crops	Interactive lecture, brainstorming, dialogue and discussion	Short test, written test, and assignment
	3 Practical	A15: He possesses practical and mental knowledge and concepts that help him know the fruit and what its main sections are.  a16: Differentiate between clustered and doubled fruits	Classification of fruits	Interactive lecture, brainstorming, dialogue and discussion	Short practical test1
2	2 Theoretical	A2: Determines the stages of growth and maturity of fruits and their types  B2: He possesses the practical and mental knowledge and concepts that help him follow the stages of fruit growth.  C4: Draws the growth curve of the fruits of the first group	Stages of growth and ripening of fruits	Interactive lecture, brainstorming, dialogue and discussion	Short test, written test, and assignment
	3 Practical	A17: Identifies the types of plant dyes and the main colors of fruits with examples.  d4: Possess the skills of measuring the sensory qualities of fruits.	Sensory measures of complete growth and maturity in fruits	Interactive lecture, brainstorming, dialogue and discussion	Short practical test1
3	2 Theoretical	A3: Determines the types of fruits, which group they belong to, and what are the stages of their growth  C5: Draws the growth curve of the fruits of the second group	The second group of fruits	Interactive lecture, brainstorming, dialogue and discussion	Short test, written test, and assignment
	3 Practical	d5: Possess the skill of measuring the qualitative characteristics of fruits.	Chemical measures of complete growth and maturity in fruits	Interactive lecture, brainstorming, dialogue and discussion	Short practical test1
4	2 Theoretical	A4: Determines breathing methods	Breathing and its relationship to	Interactive lecture,	Short test,

		for horticultural crops C5: Draws the fruit respiration curve d2: Community members participate and work to educate them about the importance of increasing cold storage to preserve agricultural products.	maturity and storage.	brainstorming , dialogue and discussion	written test, and assignment
	3 Practical	B4: Master the methods of cold storage of fruits	Storage technology for fruits and horticultural crops	Interactive lecture, brainstorming , dialogue and discussion	Short practical test
5	2 Theoretical	A5: The student acquires knowledge and concepts related to the phenomenon of climacteric and its relationship to maturity in horticultural crops. C6: Draw the respiration curve for Climacteric and non-Climacteric fruits. d3: Community members participate and work to educate them about the importance of increasing cold storage and its impact on controlling the prolongation of the storage period.	The phenomenon of chlorosis and its relationship to maturity in horticultural crops	Interactive lecture, brainstorming , dialogue and discussion	Short test, written test, and assignment
	3 Practical	A18: Identify the factors that affect artificial ripeness. What are the most important methods for measuring respiratory rate?	Artificial ripening Monday	Interactive lecture, brainstorming , dialogue and discussion	Short practical test
6	2 Theoretical	A6: The student understands what ethylene is and its role in the ripening of fruits. B3: He possesses practical and mental knowledge and concepts that help him in how to produce ethylene naturally in fruits and reduce its production.	production Study of respiratory rate and ethylene	Interactive lecture, brainstorming , dialogue and discussion	Short test, written test, and assignment
	3 Practical	A19: He possesses the practical and mental knowledge and concepts that help him know the factors affecting industrial maturity. B5: Able to measure the respiratory rate of stored fruits.	Study of respiratory rate and ethylene production and the factors affecting them	Interactive lecture, brainstorming , dialogue and discussion	Short practical test
7	2 Theoretical	A7: The student is familiar with the most important methods of reaping and harvesting fruits C7: Determines the best methods of harvesting and harvesting for each type of fruit	Harvesting and picking operations Chemical	Interactive lecture, brainstorming , dialogue and discussion	Short test, written test, and assignment
	3 Practical	b6: He possesses practical and mental knowledge and concepts that help him reduce damage and deterioration of fruits. Crops	composition of fruits	Interactive lecture, brainstorming , dialogue and discussion	Short practical test
8	2 Theoretical	A8: The student is familiar with the most important additional procedures for cooling fruits	Additional cooling transactions	Interactive lecture, brainstorming	Short test, written test, and

		C8: Determines the best cooling methods for each type of fruit  A20: Different methods are used to harvest horticultural crops  B7: Suggest any suitable methods for harvesting and packing fruits and horticultural	Collecting and preparing horticultural crops	, dialogue and discussion  Interactive lecture, brainstorming , dialogue and discussion	assignment  Short practical test1
9	2 Theoretical	A9: Modern methods are used in storing the fruits in a modified air atmosphere  A10: Differentiate between normal storage and storage in a modified air atmosphere  C9: Differentiate between normal storage and storage in a modified air atmosphere	Effect of storage in modified air atmosphere	Interactive lecture, brainstorming , dialogue and discussion	Short test, written test, and assignment
		A3: Different methods are used to pack the fruits.	Packaging of horticultural crops	Interactive lecture, brainstorming , dialogue and discussion	Short practical test1
10	2 Theoretical	A11: Modern methods are used for storing fruits in a rarefied air atmosphere  A12: Differentiate between normal storage and storage in a rarefied air atmosphere  C10: Differentiate between normal storage and storage in a rarefied atmosphere	Storage in a rarefied atmosphere	Interactive lecture, brainstorming , dialogue and discussion	Short test, written test, and assignment
		D6: able of measuring the acidity of fruits	Estimating the acidity of fruits	Interactive lecture, brainstorming , dialogue and discussion	Short practical test1
11	2 Theoretical	A12: Identify plant hormones that affect fruit growth.  C11: Shows the effect of plant hormones individually on the growth and ripening of fruits	The effect of plant hormones on growth and fruit setting	Interactive lecture, brainstorming , dialogue and discussion	Short test, written test, and assignment
		D7: Measures sugary substances in fruits	Estimation of carbohydrates in fruits	Interactive lecture, brainstorming , dialogue and discussion	Short practical test1
12	2 Theoretical	A13: Explains the chemical changes that occur in fruits during growth, ripening, and storage	Chemical changes that occur in fruits during growth, ripening, and storage	Interactive lecture, brainstorming , dialogue and discussion	Short test, written test, and assignment
		A21: The student acquires knowledge and concepts related to mechanical and electrical refrigeration devices for cold stores.  A22: He knows everything related to mechanical and electrical refrigeration devices for cold stores	Mechanical pressure refrigeration cycle	Interactive lecture, brainstorming , dialogue and discussion	Short practical test1
13	2 Theoretical	A14: Discusses topics related to the storage of horticultural crops	Report and discuss	Interactive lecture, brainstorming	Short test, written test, and

				, dialogue and discussion	assignment
	3 Practical	A23: He knows everything related to the mechanical pressure refrigeration cycle	Mechanical pressure refrigeration cycle	Interactive lecture, brainstorming , dialogue and discussion	Short practical test1
14	2 Theoretical	C12: Determines which methods of harvesting and storing are appropriate for each type of fruit	Solve the problem	Interactive lecture, brainstorming , dialogue and discussion	
	3 Practical	B8: Developed from the reality of the cold storage	A field visit to one of the fruit stores	Interactive lecture, brainstorming , dialogue and discussion	Short practical test1
15	2 theoretical	C13: Shows the effects that occur on fruits when harvested and stored under certain conditions	Solve the problem	Interactive lecture, brainstorming , dialogue and discussion	Short test, written test, and assignment
	3 Practical	B9: It is suggested to add some technologies to develop cold storages	A field visit to one of the vegetable stores	Interactive lecture, brainstorming , dialogue and discussion	Short practical test1

### 11 Course Evaluation

Evaluation Methods	Evaluation date (week)	Degree	Percentage (%)
Daily spoken examination	Theoretical: 2-15 Practical: 2 - 15	Theoretical 3 Practical 2	5%
Daily written exams	Theoretical: 2-15 Practical: 2 - 15	Theoretical 5 Practical 5	10%
2 semester exams during the semester for both practical and theoretical	Theoretical: 7-13 Practical: 6 - 14	Theoretical 10 Practical 5	15%
Assigning students to prepare reports on study topics	Theoretical: 15 Practical: 15	Theoretical 7 Practical 3	10% <i>for the practical part</i>
Final exam	Theoretical Practical	Theoretical 40 Practical 20	40% 20% <i>for the practical part</i>
Total		100	100%

### 12 Learning and Teaching Resources

Required textbooks (curricular books, if any)	1- Production of evergreen fruits. Dr. Jawad Thanoun Agha 2- Deciduous fruit technology (2017). Prof. Dr. Jassim Mohammed Alwan
Main references (sources)	
Recommended books and references (scientific journals, reports...)	1- Mesopotamia Agriculture Journal
Electronic References, Websites	Google Scholar, Research Gate



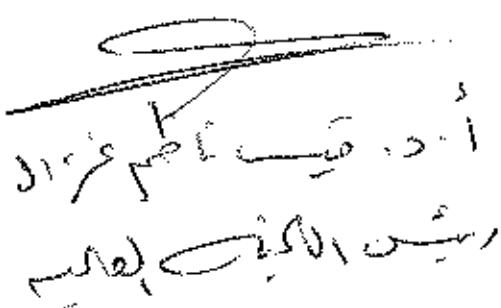
### Practical lecturer

Lecturer Dr. Mohand Akeel Ahmed  
Zohor Foad



### Theoretical lecturer:

Lecturer Dr. Badran Sabhan Abdullah Agha



م.د. مهند عباس  
زهور فؤاد



د. بشير سبهان  
عبدالله العباشي  
جامعة بغداد  
كلية التربية

## Course Description Form

1. Course Name:

**Rural Sociology**

2. Course Code:

**RUSO251**

3. Semester / Year:

**First season, 2024-2025.**

4. Description Preparation Date:

**01/02/2024**

5. Available Attendance Forms: attendance learning (theoretical and practical in-person)

**Attendance learning (theoretical in-person) .**

6. Number of Credit Hours (Total) / Number of Units (Total) 2 hours per week

**Total 30 hours (2 hours theoretical), Number of units is 2 .**

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

**1. Anhar Mohammed Ali Hasan Email: [anhar2007@uemosul.edu.iq](mailto:anhar2007@uemosul.edu.iq)**

8. Course Objectives

### **Course Objectives**

#### **Objectives of the theoretical part:**

1. Enabling the student to know, understand and assimilate rural sociology.
2. Enabling the student to differentiate between the concept of rural sociology and general statistics.
3. Enabling the student to know the principles of rural sociology.
4. Enabling the student to know the characteristics of sociology, levels of goals in rural sociology, levels of social change, adult education, adoption, categories of adoptees, communication process, the concept of communication, extension methods, and extension leadership and management.

## 9.Teaching and Learning Strategies

<b>Strategy</b>	<b>Theoretical :</b> <ol style="list-style-type: none"> <li>1. Interactive lecture.</li> <li>2. Brainstorming..</li> <li>3. Dialogue and discussion.</li> <li>4. Assigning the student to prepare a report to discuss with the students.</li> </ol>
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## 10.Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1 <sup>st</sup>	<b>Theoretical 2</b>	<b>Theoretical: a1</b>  The student learns about the origins of science Rural society and its development.	<b>Theoretical:</b>  The origins development of sociology:components or composition of society, Local communities,types of groups.	<b>Theoretical:</b>  lectures,writing on the blackboard, displaying bulletins guidance and reporting and its discuss it.	Exams,reports discussions and quizzes.
2 <sup>nd</sup>	<b>Theoretical 2</b>	<b>Theoretical: a2</b>  The student demonstrates knowledge of rural community development and attributes general rural community.	<b>Theoretical:</b>  Rural society: types of societies, general characteristics of rural society, rural population (age and gender composition).	<b>Theoretical:</b>  lectures,writing on the blackboard, displaying bulletins guidance and reporting and its discuss it.	Exams,reports, discussions and quizzes.
3 <sup>rd</sup>	<b>Theoretical 2</b>	<b>Theoretical: a3</b>  The student is familiar with rural housing patterns and rural community development.	<b>Theoretical:</b>  Rural housing patterns:social institutions and organizations existing in countryside, social system.	<b>Theoretical:</b>  lectures,writing on the blackboard, displaying bulletins guidance and	Exams,reports, discussions quizzes.

			reporting and its discuss it.	
4 <sup>th</sup>	<b>Theoretical 2</b>	<b>Theoretical : a4</b>  The student develops his knowledge of the branches of sociology and the importance of rural development.	<b>Theoretical:</b>  The concept of sociology: branches of sociology, benefits of studying sociology.	<b>Theoretical:</b>  lectures,writing on the blackboard, displaying bulletins guidance and reporting and its discuss it.
5 <sup>th</sup>	<b>Theoretical 2</b>	<b>Theoretical: b1</b>  The student explains the concept of rural sociology meeting and differences between rural sociology, general sociology, and event factors Agricultural development.	<b>Theoretical:</b>  The concept of rural sociology: The difference between general sociology and rural sociology Areas of rural sociology. Factors that bring about agricultural development: markets for agricultural products, continuous innovation in agricultural technology.	<b>Theoretical:</b>  lectures,writing on the blackboard, displaying bulletins guidance and reporting and its discuss it.
6 <sup>th</sup>	<b>Theoretical 2</b>	<b>Theoretical: a5</b>  Through the scientific visit, the student acquires the basic concepts in this study of sociology and principles of agricultural development events.	<b>Theoretical: Basic concepts in the study of rural sociology:</b> culture, general characteristics of culture, a scientific visit to the Agricultural Extension Department, Nineveh Agriculture Directorate.	<b>Theoretical:</b>  lectures,writing on the blackboard, displaying bulletins guidance and reporting and its discuss it.

7 <sup>th</sup>	<b>Theoretical 1</b> <b>Theoretical: a6</b>  The student understands the components of culture socialization and basic steps in developing a rural community.	<b>Theoretical:</b>  Components of culture: values and standards, customs and traditions, beliefs, Second:  Socialization goals socialization.	<b>Theoretical:</b>  lectures,writing on the blackboard, displaying bulletins guidance and reporting and its discuss it..	Exams,reports, discussions and quizzes
8 <sup>th</sup>	<b>Theoretical 2</b> <b>Theoretical: a7</b>  The student learns about social adaptation, social control, and means of social adaptation and levels of social interaction.	<b>Theoretical:</b>  Fourth: Social adjustment: Social control... Method means of social pressure. Means of social adaptation. Social interaction, levels of social interaction.	<b>Theoretical:</b>  lectures,writing on the blackboard, displaying bulletins guidance and reporting and its discuss it..	Exams,reports, discussions and quizzes
9 <sup>th</sup>	<b>Theoretical 2</b> <b>Theoretical: b2</b>  The student learns about the elements of Iraqi society and general characteristics of rural society.	<b>Theoretical:</b>  Elements of rural community formation: components of social interaction. General characteristics of rural society.	<b>Theoretical:</b>  lectures,writing on the blackboard, displaying bulletins guidance and reporting and its discuss it..	Exams,reports, discussions and quizzes
10 <sup>th</sup>	<b>Theoretical 2</b> <b>Theoretical: b3</b>  The student explains class mobility, the factors responsible for class mobility, and other problems that rural society suffers from.	<b>Theoretical:</b>  Class mobility,principles of class differentiation between rural and urban society, factors responsible for class mobility.	<b>Theoretical:</b>  lectures,writing on the blackboard, displaying bulletins guidance and reporting and its discuss it..	Exams,reports, discussions and quizzes

11 <sup>th</sup>	<b>Theoretical 2</b>	<b>Theoretical: a8</b>  The student learns about settlement patterns,its sections and social problems.	<b>Theoretical:</b>  Settlement: settlement patterns , sections of settlement patterns.	<b>Theoretical:</b>  lectures,writing on the blackboard, displaying bulletins guidance and reporting and its discuss it.	Exams,reports, discussions and quizzes
12 <sup>th</sup>	<b>Theoretical 2</b>	<b>Theoretical: a9</b>  The student explains the forms of settlement rural areas and different policies in dealing with rural problems.	<b>Theoretical:</b>  Forms of settlement in rural areas: factors that help in choosing villages, sections of agglomerated villages, their forms, disadvantages and advantages the linear village, traditional village.	<b>Theoretical:</b>  lectures,writing on the blackboard, displaying bulletins guidance and reporting and its discuss it.	Exams,reports, discussions and quizzes
13 <sup>th</sup>	<b>Theoretical 2</b>	<b>Theoretical: a10</b>  The student explains the historical development of population studies, factors affecting population and stages of population growth.	<b>Theoretical:</b>  Historical development of Population studies: definition of population science,factors affecting population and stages of population growth.	<b>Theoretical:</b>  lectures,writing on the blackboard, displaying bulletins guidance and reporting and its discuss it.	Exams,reports, discussions and quizzes
14 <sup>th</sup>	<b>Theoretical 2</b>	<b>Theoretical: a11</b>  The student demonstrates his knowledge about immigration, its types and factors hindering immigration.	<b>Theoretical:</b>  Migration: types of migration. Types of migration, factors hindering migration.	<b>Theoretical:</b>  lectures,writing on the blackboard, displaying bulletins guidance and reporting and its discuss it.	Exams,reports, discussions and quizzes

15 <sup>th</sup>	<b>Theoretical 2</b>	<b>Theoretical: b4</b>  The student acquires knowledge about the role of rural social institutions enhancing the advisory role in solving obstacles rural development.	<b>Theoretical:</b> Rural social institutions: First: the family as a social institution second the educational institution.Third: The health institution.Fourth: The economic institution. Fifth: The political institution.	<b>Theoretical:</b> lectures,writing on the blackboard, displaying bulletins guidance and reporting and its discuss it.	Exams,reports, discussions and quizzes
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#### 1.1.Course Evaluation :

No.	Evaluation methods	Evaluation date (week)	marks	Relative weight (%)
1	The first short test Short test (1) Quiz.	Week 4: Theoretical: Short test (1) Quiz.	Theoretical: 5	5%
2	Monthly exam (1)	Week 9: Theoretical test (1),	Theoretical: 15 Practical : 5,	15%
3	Second short test (2) Quiz.	Week 11: Theoretical: Short Test (2) Quiz.	Theoretical: 5	5%
4	Monthly exam (2)	Week 13: Theoretical test (2).	Theoretical: 15	15%
5	Quest rate	Seasonal rates are announced at the end of the semester.	Theoretical: 40	40%
6	Final theoretical test	The week of theoretical exams.	60	60%
7	Total	The final score of the theoretical of final exam at the end of academic year.	100	100%

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

## 12. Learning and Teaching Resources

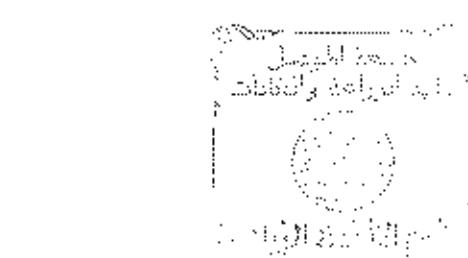
Required textbooks (curricular books, if any)	<b>Rural community for year 1992.</b>  <b>Author:</b> Assistant. Prof. Salim Khalaf Abid Al-Marsoumi .
Main references (sources)	1. Agricultural extension science, organization and work for the year 2014.  Authors: Prof. Dr. Mukhtar Muhammad Abdulla.  Prof. Dr. Essam Muhammad Al-Ali.  Dr. Ahmed Maher Al-Gohary.  2. Principles of agricultural extension for the year 2016.  Prof. Dr. Awni Al-Hamdo Lilah .
Recommended books and references (scientific journals, reports...)	Journal of the Scientific Society for Agricultural Extension /College of Agriculture,Cairo University/Egypt.
Electronic References, Websites	Department of Agricultural Extension and Training /Iraqi Ministry of Agriculture. <a href="http://www.agriextension.gov.iq/">http://www.agriextension.gov.iq/</a> Extension Center/College of Food and Agricultural Sciences/ King Saud University / Kingdom of Saudi Arabia. <a href="https://cfas.ksu.edu.sa/ar">https://cfas.ksu.edu.sa/ar</a>

  
Anhar Mohammed Ali Ehasan.

**Theoretical subject instructor**

  
Prof. Dr. Qais Nadhim Ghazal

Chairman of the Scientific Committee



  
Assistant Prof. Dr. Zouwaid Fathi Abid

Head of Department.

## Course Description Form

1. Course Name:	Statistical
2. Course Code:	STAT109
3. Semester / Year:	2024 - 2025 First semester (Autumn)
4. Description Preparation Date:	1/9/2024
5. Available Attendance Forms:	Attended
6. Number of Credit Hours (Total) / Number of Units (Total):	2 Theoretical + 3 Practical / 3.5 Unit
7. Course administrator's name (mention all, if more than one name):	Email: zaid.alhabbar@uomosul.edu.iq Email: khaleelibk@uomosul.edu.iq
8. Course Objectives	

- Knows the science of statistics and its types, and also differentiates between descriptive statistics and inferential or inferential statistics
- Explains what descriptive variables are and recognizes the difference between a sample and a population
- Organize and draw a frequency distribution table and identify its parts
- Organizes a table of relative frequency distribution and ascending and descending grouping
- He finds the arithmetic mean - and learns about the properties of the arithmetic mean
- Works on how to find the range, mean deviation, variance, and standard deviation
- Distinguish the difference between permutations, combinations and a random experiment
- Expresses the components of discrete probability distributions
- Identify the statistical hypothesis, the null hypothesis, and the alternative hypothesis - compare the types of error
- Learn about the T-test and the Z-test and the difference between them
- Learn how to perform the chi-square test steps
- Learn about correlation, regression, correlation coefficient, regression, and the properties of each

### 9. Teaching and Learning Strategies

Theoretical:	Practical
<ul style="list-style-type: none"> <li>• Interactive lecture</li> <li>• Brainstorming</li> <li>• Dialogue and discussion</li> <li>• Assigning tasks and reporting</li> <li>• The student is assigned to prepare reports based on his own diligence and prepared</li> </ul>	<ul style="list-style-type: none"> <li>• Assigning group work to reveal leadership skills</li> <li>• Assigning tasks and a report for each lecture</li> </ul>

for discussion with the  
students

### 10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2 Theoretical + 3 Practical	a1: Knows the science of statistics and its types, and also distinguishes between descriptive statistics and inferential statistics a7: Differentiate between descriptive and inferential statistics, as the most important statisticians in the twentieth century remember	Theoretical: Statistics, its definition and types  Practical: Solve mathematical exercises on the topic	Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style  Practical: Assigning tasks and reporting	Short exams, assignment of duties, discussions
2	2 Theoretical + 3 Practical	a2: Explains what descriptive variables are and recognizes the difference between a sample and population a8: Compares quantitative variables and descriptive variables It also distinguishes between the population and the sample, giving examples of each	Theoretical: The nature and types of statistical data  Practical: Solve mathematical exercises on the topic	Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style  Practical: Assigning tasks and reporting	Short exams, assignment of duties, discussions
3	2 Theoretical + 3 Practical	c1: Organize and draw a frequency distribution table and identify its parts b2: Organizes a frequency distribution table and identifies its components. He also experiments with finding the ascending and descending group frequencies	Theoretical: tabular presentation and graphical representation  Practical: Solve mathematical exercises on the topic	Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style  Practical: Assigning tasks and reporting	Short exams, assignment of duties, discussions
4	2 Theoretical + 3 Practical	c2: Organizes table the relative frequency distribution and ascending and descending grouping b3: Calculates the arithmetic mean, geometric mean, and harmonic mean. It also	Theoretical: Types of frequency distribution tables and how to draw them  Practical: Solve	Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style  Practical:	Short exams, assignment of duties, discussions

		determines the squared mean, median, and mode.	mathematical exercises on the topic	Assigning tasks and reporting	
5	2 Theoretical + 3 Practical	b1: Finds the arithmetic mean - and learns about the properties of the arithmetic mean  c6: The range law, mean deviation, variance of the mean deviation, and standard deviation are applied to the classified and unclassified data	Theoretical: Measures of concentration or mediation  Practical: Solve mathematical exercises on the topic	Theoretical: auditory methods  Style of writing on the blackboard  Direct dialogue style  Practical: Assigning tasks and reporting	Short exams, assignment of duties, discussions
6	2 Theoretical + 3 Practical	c3: Works out how to find the range, mean deviation, variance, and standard deviation  c7: Explains probability theory for random experiment, sample space, and mutually exclusive events with solving examples	Theoretical: measures of dispersion or difference  Practical: Solve mathematical exercises on the topic	Theoretical: auditory methods  Style of writing on the blackboard  Direct dialogue style  Practical: Assigning tasks and reporting	Short exams, assignment of duties, discussions
7	2 Theoretical + 3 Practical	c4: Distinguishes the difference between permutations, combinations and a random experiment  b4: Explains the variables of the binomial distribution law	Theoretical: Principles of probability theory  Practical: Solve mathematical exercises on the topic	Theoretical: auditory methods  Style of writing on the blackboard  Direct dialogue style  Practical: Assigning tasks and reporting	Short exams, assignment of duties, discussions
8	2 Theoretical + 3 Practical	c5: Expresses the components of discrete probability distributions  c8: Explains the null hypothesis and the alternative hypothesis and compares them	Theoretical: Piecewise probability distributions  Practical: Solve mathematical exercises on the topic	Theoretical: auditory methods  Style of writing on the blackboard  Direct dialogue style  Practical: Assigning tasks and reporting	Short exams, assignment of duties, discussions
9	2 Theoretical + 3 Practical	c3: Recognizes the statistical hypothesis, the null hypothesis, and the alternative hypothesis -	Theoretical: Hypothesis testing	Theoretical: auditory methods  Style of writing	Short exams, assignment of duties, discussions

		<p>compares the types of error</p> <p>b5: Shows the T test "T-test" and shows the Z test "Z-test"</p>	<p>Practical: Solve mathematical exercises on the topic</p>	<p>on the blackboard Direct dialogue style Practical: Assigning tasks and reporting</p>	
10	2 Theoretical + 3 Practical	<p>a4: Learn about the T-test and the Z-test and the difference between them</p> <p>b6: Enumerate the types of applications of chi-square</p>	<p>Theoretical: Hypothesis testing</p> <p>Practical: Solve mathematical exercises on the topic</p>	<p>Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style Practical: Assigning tasks and reporting</p>	<p>Short exams, assignment of duties, discussions</p>
11	2 Theoretical + 3 Practical	<p>a5: Learn how to perform the chi-square testing steps</p> <p>b7: Explains the simple connection, and reinforces it with examples</p>	<p>Theoretical: Chi-square distribution</p> <p>Practical: Solve mathematical exercises on the topic</p>	<p>Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style Practical: Assigning tasks and reporting</p>	<p>Short exams, assignment of duties, discussions</p>
12	2 Theoretical + 3 Practical	<p>a6: Learn about correlation, regression, correlation coefficient, regression, and the properties of each</p> <p>b8: Explains the nature of the distribution of F. It also explains the relationship between the distributions of Z, T, and F and the distinction between each of them</p>	<p>Theoretical: simple correlation and regression</p> <p>Practical: Solve mathematical exercises on the topic</p>	<p>Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style Practical: Assigning tasks and reporting</p>	<p>Short exams, assignment of duties, discussions</p>
13	2 Theoretical + 3 Practical	<p>d1: Training on how to apply statistics in designing agricultural experiments</p> <p>d2: Organize a report on the statistics topics studied, and learn how to apply statistics in agricultural sciences</p>	<p>Theoretical + practical: report and discussion</p>	<p>Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style Practical: Assigning tasks and reporting</p>	<p>Short exams, assignment of duties, discussions</p>

14	2 Theoretical + 3 Practical	e1: Visit to the Statistics Department with the aim of learning about the most important statistical processes and how to implement E3: The student assumes some problems in agricultural fields and laboratories and how to develop statistical solutions	Theoretical + practical: A field visit to the Department of Statistics - University of Mosul	Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style  Practical: Assigning tasks and reporting	Short exams, assignment of duties, discussions
15	2 Theoretical + 3 Practical	e2: Visit to the Mathematics Department with the aim of learning about the most important statistical operations and how to implement them e3: The student assumes some problems in agricultural fields and laboratories and how to develop statistical solutions	Theoretical + practical: A field visit to the Department of Mathematics - University of Mosul	Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style  Practical: Assigning tasks and reporting	Short exams, assignment of duties, discussions

### 11. Course Evaluation

	Evaluation methods	Evaluation date (week)	Degree	Percentage weight %
1	Report 1	Fourth week	2.5	2.5
2	Report 2	Fifth week	2.5	2.5
3	Short test (1) Quiz	Sixth week	2	2
4	Short test (2) Quiz	Fourteenth week	2	2
5	Short test (3) Quiz	Fifteenth week	1	1
6	Semester test (1)	Sixth week	7.5	7.5
7	Semester test (2)	Eleventh week	7.5	7.5
8	Final theoretical test	Final semester test	40	40
9	Practical field project	The fifteenth week	5	5
10	Field evaluation	Third and fifth week	2	2
11	Practical short test (1) Quiz	First week	1	1
12	Short practical test (2) Quiz	Fourth week	0.5	0.5
13	Short practical test (3) Quiz	Fourteenth week	1	1
14	Live drawings and homework	Weeks 6, 8, 9, 10, 11, 12 and 13	5.5	5.5
15	Final practical test	Final semester test	20	20
	Total	100	Degree	Percentage weight %

### 12. Learning and Teaching Resources

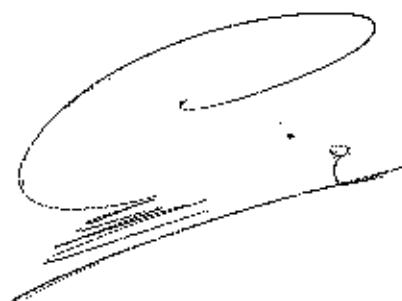
Required textbooks (curricular books, if any)

Introduction to statistics

Main references (sources)	Principles of statistics
Recommended books and references (scientific journals, reports...)	Statistics book and methods of statistics
Electronic References, Websites	



Theoretical lecturer  
Dr. Zaid Mohammed Alhabbar



Practical lecturer  
Khaleel Ibrahim Khaleel



Head of department of plant protection  
Prof. Dr. Alaa Muhammad Abdullah



Head of the Scientific Committee  
Prof. Dr. Alaa Muhammad Abdullah



## Course Description Form

1.	Course Name:	
<b>Principles of Food Industry</b>		
2.	Course Code:	
<b>PRFH111</b>		
3.	Semester / Year:	
<b>The first autumn semester 2024-2025</b>		
4.	Description Preparation Date:	
<b>1/9/2024</b>		
5.	Available Attendance Forms:	
Attendance		
6.	Number of Credit Hours (Total) Number of Units (Total)	
<b>Theoretically 2+3 practical / 3.5 unit</b>		
7.	Course administrator, name (mention all if more than one name):	
<b>Name:</b> Dr. Yuosra Amer Ali <b>Email:</b> <a href="mailto:yuosra_amer@uomosul.edu.iq">yuosra_amer@uomosul.edu.iq</a> Roaa Adil Amed		
8.	Course Objectives:	
<b>Theoretical:</b> <ul style="list-style-type: none"> <li>-1Preparing graduates with high theoretical and practical academic skills to meet the academic reality.</li> <li>-2Providing students with an understanding of the nature and function of food processing and food preservation methods from both an academic and professional perspective.</li> <li>-3Learning the types of food processing, food preservation methods, their importance, types, and stages of food spoilage.</li> <li>-4Understanding the methods of food fraud in food products.</li> <li>5- Understanding the steps of food manufacturing, from packaging to marketing.</li> </ul>		<b>Practical:</b> <ul style="list-style-type: none"> <li>-1The student's ability to identify the basic components of food.</li> <li>-2The student's ability to understand the steps involved in preserving various types of food.</li> <li>3- The student's ability to understand the storage conditions and their effects on food.</li> </ul>
9.	Teaching and Learning Strategies:	
<b>Theoretical:</b> Interactive lecture. -Brainstorming. -Dialogue and discussion. -Assigning tasks and reporting. The student is assigned to prepare a report entitled from his own diligence and prepares it for discussion with the students. - Assigning group work to reveal leadership skills.		<b>Practical:</b> <ul style="list-style-type: none"> <li>- Assigning group work to reveal leadership skills.</li> <li>Assigning tasks and reporting for each experiment.</li> </ul>

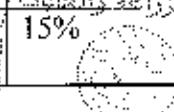


10 Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2theoretical 3 practical	theoretical: The importance of food industries and their emergence practical:	theoretical: The importance of food industries and their emergence. practical:	Auditory methods, writing method on the board, direct dialogue meth	Short exams, assignments, discussions
2	2theoretical 3 practical	theoretical: Food components practical : Types of hydrometer	theoretical: Carbohydrates And its types practical: Types of hydrometer	Auditory methods, writing method on the board, direct dialogue meth	Short exams, assignments, discussions
3	2theoretical 3 practical	theoretical: Properties of saturated fatty acids practical: Pearson square	theoretical: Properties of saturated fatty acids practical: Pearson square	Auditory methods, writing method on the board, direct dialogue meth	Short exams, assignments, discussions
4	2theoretical 3 practical	theoretical: Properties of unsaturated fatty acids practical: Food preservation by refrigeration and freezing	theoretical: Properties of unsaturated fatty acids practical: Food preservation by refrigeration and freezing	Auditory methods, writing method on the board, direct dialogue meth	Short exams, assignments, discussions
5	2theoretical 3 practical	theoretical: staple foods practical: Preserving food by canning	theoretical: staple foods practical: Preserving food by canning	Auditory methods, writing method on the board, direct dialogue meth	Short exams, assignments, discussions
6	2theoretical 3 practical	theoretical: Oils and Fats – Scientific Visit practical: Preservation with chemical additives	theoretical: Complex fats practical: Preservation with chemical additives	Auditory methods, writing method on the board, direct dialogue meth	Short exams, assignments, discussions
7	2theoretical 3 practical	theoretical: tea practical: Preservation by dryin	theoretical: tea practical: Preservation by dryin	Auditory methods, writing method on the board, direct dialogue meth	Short exams, assignments, discussions
8	2theoretical 3 practical	theoretical: Heat preservation. practical: Jam and jelly industry	theoretical: Heat preservation practical : Jam and jelly industry	Auditory methods, writing method on the board, direct dialogue meth	Short exams, assignments, discussions
9	2theoretical 3 practical	theoretical: Refrigeration and	theoretical: Refrigrcation and	Auditory methods, writing	Short exams, assignments,

		freezing. practical : Production of paste cheese	freezing practical : Production of paste a cheese	method on the board, direct dialogue meth	discussions
10	2theoretical 3 practical	theoretical: Preservation by dryi practical: Preserving meat and meat products	theoretical: Preservation by dryi practical : Preserving meat and meat products	Auditory methods, writi method on the board, direct dialogue meth	Short exams, assignments, discussions
11	2theoretical 3 practical	theoretical: Cans and their manufacture practical Vinegar making	theoretical: Cans and their manufacture practical Vinegar making	Auditory methods, writi method on the board, direct dialogue meth	Short exams, assignments, discussions
12	2theoretical 3 practical	theoretical: industrial fermentati properties. practical : refractometer	theoretical: industrial fermentati practical:	Auditory methods, writi method on the board, direct dialogue meth	Short exams, assignments, discussions
13	2theoretical 3 practical	theoretical: Explains vitamins ar their classification. practical : Gelatin industry	theoretical: Vitamins practical: Gelatin industry	Auditory methods, writi method on the board, direct dialogue meth	Short exams, assignments, discussions
14	2theoretical 3 practical	theoretical: Preservation by canning. practical: Pickle industry	theoretical: Preservation by cann practical: Pickle industry	Auditory methods, writi method on the board, direct dialogue meth	Short exams, assignments, discussions
15	2theoretical 3 practical	theoretical: Study the effect of storage conditions o the manufactured product. practical : Tests of product storage conditions at manufacturing.	theoretical: Study the effect of storage conditions on the manufactured product. practical: Tests of product stor conditions after manufacturing.	Auditory methods, writi method on the board, direct dialogue meth	Short exams, assignments, discussions

#### Course Evaluation

No.	Evaluation methods	Evaluation date (week)	Grade	Relative weight%
1	Final theoretical report,	week 15	7 theoretical 6 practical	13%
2	Short test (1) Quiz	a week (3)	4 theoretical 2 practical	6%
3	Midterm Exam	week (9)	10 theoretical 5 practical	15%



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4	Short test (2) Quiz	week (12)	4theoretical 2 practical	6%
5	Final practical exam	practical exams week	20	20%
6	Final theoretical exam	theoretical exams week	40	40%
	The Total		100	100%

#### 12. Learning and teaching Resources

Required textbooks (curricular books, if any)	The Principles of Food Industries book, authored by: Dr. Majid Bashir Al-Aswad, Omar Fawzi Abdel Aziz, and Dr. Amjad Bouya Sulaqa.
Main references (sources)	The Principles of Food Industries book, authored by: Dr. Majid Bashir Al-Aswad, Omar Fawzi Abdel Aziz, and Dr. Amjad Bouya Sulaqa.
Recommended books and references (scientific journals, reports...)	-
Electronic References, Websites	World Health Organization, Food and Drug Administration.

مدرس المادة العملية: م.م. رفوى عادل أحمد

مدرس المادة النظرية: م.د. يسرى عامر على

رئيس قسم الاقتصاد الزراعي : أ.د. الأاء محمد

رئيس اللجنة العلمية : أ.د. الأاء محمد عبدالله



## Course Description Form

1. Course Name:	Principles of Dairy
2. Course Code:	PRPD227
3. Semester / Year:	First semester (fall) / 2024-2025
4. Description Preparation Date:	1/2/2025
5. Available Attendance Forms:	Presence + Online
6. Number of Credit Hours (Total) / Number of Units (Total):	2 theoretical hours + 3 practical hours (75 hours) / 3.5 units
7. Course administrator's name (mention all if more than one name):	Name: M.D. Saif Ali Mohammed MSc waeadallah hashim
8. Course Objectives	
<p><b>Theoretical</b></p> <ul style="list-style-type: none"> <li>- The learner should be able to define the concept of milk and its sensory, chemical and physical characteristics</li> <li>- Choosing the suitability of factors affecting milk preservation and methods of controlling milk contamination</li> <li>- Differentiate between different systems for preserving milk samples before manufacturing</li> <li>- Distinguishing between types of milk, whether cow or buffalo</li> <li>- Familiarity with the information the food engineer needs about the components of milk</li> </ul>	<p><b>Practical</b></p> <ul style="list-style-type: none"> <li>- Enabling the student to become familiar with most important laboratory methods for detecting spoilage of milk and practical experiments diagnosing types of milk.</li> </ul>
9. Teaching and Learning Strategies	
<p><b>Theoretical</b></p> <ul style="list-style-type: none"> <li>- Interactive lecture</li> <li>- Brainstorming</li> <li>- Dialogue and discussion</li> <li>- Assigning reports</li> <li>- Conducting monthly and daily examinations</li> </ul>	<p><b>Practical</b></p> <ul style="list-style-type: none"> <li>- Interactive lecture</li> <li>- Discussion, dialogue, brainstorming</li> <li>- Conducting laboratory experiments</li> <li>- Assigning reports</li> <li>- Conducting daily and monthly examinations</li> <li>- Presentations of examples of food spoilage due to molds and yeasts</li> <li>- He is assigned to prepare a report entitled from his own diligence and prepare it for discussion with the students</li> </ul>
10. Course Structure	

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2Theoretical 3Practical	<b>THEORETICAL</b> B1: The student evaluates dairy and the positive and negative relationship with the composition of dairy products <b>PRACTICAL:</b> C5: Checks the method of receiving the milk	<b>THEORETICAL</b> Milk Definitions - Factors Affecting milk composition practical : Sampling methods	<b>THEORETICAL</b> audio methods, Writing on the board Direct dialogue style <b>PRACTICAL</b> Assigning tasks and reports	Short exams, assignments, discussions
2	2Theoretical 3Practical	<b>THEORETICAL.</b> C1: The student learns to study and identify all the properties of milk <b>PRACTICAL :</b> B6: Detects sensory tests of milk	<b>THEORETICAL</b> Physical properties of milk practical : Sensory tests and milk judging	<b>THEORETICAL</b> audio methods, Writing on the board Direct dialogue style <b>PRACTICAL</b> Assigning tasks and reports	Short exams, assignments, discussions
3	2Theoretical 3Practical	<b>THEORETICAL</b> B2: The student learns about examining the chemical composition of fat, lactose, and water <b>PRACTICAL :</b> B7: Measures the percentage of fat in milk	<b>THEORETICAL</b> Water-fat-lactose practical : Estimating the percentage of fat in milk	<b>THEORETICAL</b> audio methods, Writing on the board Direct dialogue style <b>PRACTICAL</b> Assigning tasks and reports	Short exams, assignments, discussions
4	2Theoretical 3Practical	<b>THEORETICAL</b> A1: The student examines the laboratory analysis and estimation of types of milk proteins <b>PRACTICAL :</b> C6: Discovers methods of milk adulteration	<b>THEORETICAL</b> Protein estimation practical : Milk adulteration and methods for detecting it	<b>THEORETICAL</b> audio methods, Writing on the board Direct dialogue style <b>PRACTICAL</b> Assigning tasks and reports	Short exams, assignments, discussions
5	2Theoretical 3Practical	<b>THEORETICAL</b> C2: The student analyzes, estimates and	theoretical Enzymes - salts Mineral - vitamins practical .	<b>THEORETICAL</b> audio methods, Writing on the board	Short exams, assignments, discussions

		studies the chemical composition of milk practical : C7: Tests the level of contamination in milk and methods for detecting contamination	Bacteriological examinations of milk	Direct dialogue style <b>PRACTICAL</b> Assigning tasks and reports	
6	2Theoretical 3Practical	THEORETICAL C3: The student judges the detection of contaminants in milk and milk products practical : B8: Try different types of acidity measurements in milk	THEORETICAL Microbiology in the milk practical : Estimation of milk acidity	THEORETICAL audio methods, Writing on the board Direct dialogue style <b>PRACTICAL</b> Assigning tasks and reports	Short exams, assignments, discussions
7	2Theoretical 3Practical	THEORETICAL C4: The student studies and reviews infectious diseases and determines their causes practical : B9: Explains the causes of mastitis	THEORETICAL Transmitted diseases Milk road practical : Detection of milk taken from cattle infected with mastitis	THEORETICAL audio methods, Writing on the board Direct dialogue style <b>PRACTICAL</b> Assigning tasks and reports	Short exams, assignments, discussions
8	2Theoretical 3Practical	THEORETICAL A2: The student sees to use mathematical and mathematical equations to adjust milk fat <b>PRACTICAL</b> : B10: It continues to find out which substances increase the stability of milk	THEORETICAL Adjusting the fat percentage in Milk (Pearson box) practical : Milk stability tests	THEORETICAL audio methods, Writing on the board Direct dialogue style <b>PRACTICAL</b> Assigning tasks and reports	Short exams, assignments, discussions
9	2Theoretical 3Practical	THEORETICAL B3: The student judges the work on determining the route for receiving and distributing milk	THEORETICAL Prepare milk in Farm and milk receiving practical : Milk fermentation	THEORETICAL audio methods, Writing on the board Direct dialogue style	Short exams, assignments, discussions

		<b>PRACTICAL :</b> C8: Discovers how to make yogurt	industry	<b>PRACTICAL</b> Assigning tasks and reports	
10	2Theoretical 3Practical	<b>THEORETICAL</b> A3: The student experiences the use milk separator device and modern method for separating milk <b>PRACTICAL:</b> B11: Examines the types of curdiness of milk	<b>THEORETICAL</b> Milk separator and industry Cream practical : Cheese making	<b>THEORETICAL</b> audio methods, Writing on the board Direct dialogue style <b>PRACTICAL</b> Assigning tasks and reports	Short exams, assignments, discussions
11	2Theoretical 3Practical	<b>THEORETICAL</b> B4: The student experiments with using methods of pasteurizing and sterilizing milk and preserving it for the longest period <b>PRACTICAL:</b> B12: Explains methods of making cream	<b>THEORETICAL</b> Thermal transactions For milk practical : Cream industry	<b>THEORETICAL</b> audio methods, Writing on the board Direct dialogue style <b>PRACTICAL</b> Assigning tasks and reports	Short exams, assignments, discussions
12	2Theoretical 3Practical	<b>THEORETICAL</b> E1: The student produces cheese, yogurt, and enriched and dried milk <b>PRACTICAL:</b> C10: Discovers how to make butter	<b>THEORETICAL</b> Cheese making And fermented milk practical : Butter industry	<b>THEORETICAL</b> audio methods, Writing on the board Direct dialogue style <b>PRACTICAL</b> Assigning tasks and reports	Short exams, assignments, discussions
13	2Theoretical 3Practical	<b>THEORETICAL</b> A4: The student lead discussion groups related to milk safety and ways to prevent <b>PRACTICAL:</b> B13: Identify the best way to calculate ice cream mixture	<b>THEORETICAL</b> Report and discuss practical : Calculations for making milk ice cream mixes	<b>THEORETICAL</b> audio methods, Writing on the board Direct dialogue style <b>PRACTICAL</b> Assigning tasks and reports	Short exams, assignments, discussions
14	2Theoretical 3Practical	<b>THEORETICAL</b> B5: The student identifies health risks their impact on human health, and the impact of negligence on public health	<b>THEORETICAL</b> A field visit to a dairy factory and submitting a report on the microorganisms common in milk	<b>THEORETICAL</b> audio methods, Writing on the board Direct dialogue style <b>PRACTICAL</b>	Short exams, assignments, discussions

		<b>PRACTICAL :</b> C11: Testing the manufacture of milk ice	contamination practical : Manufacture of milk ice cream	Assigning tasks and reports	
15	2Theoretical 3Practical	<b>THEORETICAL</b> e1 The student A5: The student experiences the types of work steps in dairy factories <b>PRACTICAL:</b> B14: Experiment with making water ice	<b>THEORETICAL</b> A field visit to a food factory and submitting a report on microorganisms common in food contamination practical : Water ice industry	<b>THEORETICAL</b> audio methods, Writing on the board Direct dialogue style <b>PRACTICAL</b> Assigning tasks and reports	Short exams, assignments, discussions

### 11. Course Evaluation

t	Evaluation methods	Evaluation date (one week)	Grade	Relative weight %
1	Final theoretical report + theoretical practical reports	Theoretical 15 weeks Practical 1-15 weeks	7theoretical + 6 practical	13%
2	Short test 1 Quiz	3 weeks	4theoretical + 2practical	6%
3	Midterm exam (theoretical and practical)	9 weeks	10theoretical + 5 practical	15%
4	Short test 2 Quiz	12 weeks	4 theoretical + 2 practical	6%
5	Final practical test	practical exams week	20	20%
6	Final theoretical exam	theoretical exams week	40	40%
			100	100

### 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Book of principles of dairy science
Main references (sources)	
Recommended books and references (scientific journals, reports...)	Dairy products book 2007
Electronic References, Websites	The World Health Organization and the Food and Drug Administration American

Course administrator's name : Dr.Saif Ali mohammed

and MSc waeadallah hashim

Head of Scientific council : Prof. Dr. Kais Nazem Ghazal

Head of Department : Prof. Dr. Zuwaid Fathi Abd

## Course Description

1. Course Name:	English Language 2				
2. Course Code:	ENGL 201				
3. Semester / Year:	2024/2025				
4. Description Preparation Date:	01/02/2025				
5. Available Attendance Forms:	Presence + Electronic				
6. Number of Credit Hours (Total) / Number of Units (Total):	30 Hours 2 Unit				
7. Course administrator's name (mention all if more than one name)	Name: A.L. Sarmed Hashim Taha <a href="mailto:sarmed.almaula@uomosul.edu.iq">sarmed.almaula@uomosul.edu.iq</a>				
<b>8. Course Objectives</b>					
Course Objectives		<ul style="list-style-type: none"> <li>• To going on studying the English language in special the scientific language</li> <li>• Widening student mind about scientific and literature English vocabularies</li> <li>• Helping the students to think and write in English</li> </ul>			
<b>9. Teaching and Learning Strategies</b>					
Strategy		Making use of the electronic available methods alike the auditory or the visual in addition to the white board			
<b>10. Course Structure</b>					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2hours Presence	(A)The student should be able to know the basics of the English language	Introduction to learning English with the new Oxford headway for Pre-Intermediate students+ point of view and mapping the way	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz
2	2hours Presence	(A)The student should be able to know the tenses of the English language	Practicing English with "The Great Communicators" – other methods Reading out clearly and learning pronunciation – Vocabulary	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz
3	2hours Presence	(A)The student should be able to	Spoken English informal Language	Electronic lectures, videos, posters and	Exams Reports

		know the rules of the English language	1 conversation with students	other methods related to learning	Discussions quiz
4	2hours Presence	(A)The student should be able to know the basics of the English language	Practicing English with "A Walk with Death" – Reading out clearly and learning pronunciation + Vocabulary	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz
5	2hours Presence	(A)The student should be able to know the basics of the English language	Practicing English with "Flying for a living" + Reading out clearly and learning pronunciation + Vocabulary	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz
6	2hours Presence	(A)The student should be able to know the basics of the English language	Dealing with English in Agriculture within different specialties (reading and pronunciation) Language Focus Part 1 (The Parts of a Plant and their Functions)	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz
7	2hours Presence	(A)The student should be able to know the basics of the English language	Definition of the best ways to study English	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz
8	2hours Presence	(A)The student should be able to know the basics of the English language	Definition of the Best ways to study English	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz
9	2hours Presence	(A) The student should be able to know the basics of the English language	Definition of the Best ways to study English.	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz
10	2hours Presence	(A) The student should be able to know the basics of the English language	Definition of the Best ways to study English	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz
11	2hours Presence	(A) The student should be able to know the basics of the English language	Definition of the Best ways to study English.	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz
12	2hours Presence	(A)The student should be able to know the basics of	Definition of the Best ways to study English.	Electronic lectures, videos, posters and other methods	Exams Reports Discussions

		the English language	Scientific Tour	related to learning	quiz
13	2hours Presence	(A)The student should be able to know the basics of the English language	Definition of the Best ways to study English	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz
14	2hours Presence	(A)The student should be able to know the basics of the English language	Definition of the Best ways to study English	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz
15	2hours Presence	(B)The student should be able to know the basics of the English language	Definition of the Best ways to study English.	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz

#### 11. Course Evaluation

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

#### 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	Rapid Review of English Grammar 1957
Recommended books and references (scientific journals, reports...)	New Headway - English course English in agriculture 1985 oxford bookworms
Electronic References, Websites	<a href="https://translate.yandex.com/">https://translate.yandex.com/</a> <a href="https://ar.youglis.com/">https://ar.youglis.com/</a> <a href="https://readlang.com/">https://readlang.com/</a> <a href="http://www.reverso.net">www.reverso.net</a> <a href="https://elevenlabs.io/app/home">https://elevenlabs.io/app/home</a> /The Library Genesis junkybooks / cole13 / pdfdrive

A.L. Sarmed Hashim Taha

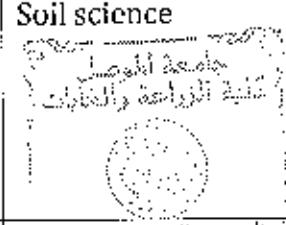
Head Of Department  
Zwafatay Obel

Chairperson of the Scientific Committee

Dr. Naima Ghazal

## Course Description Form

1. Course Name:	Principles of soil science	
2. Course Code:	PRSS113	
3. Semester / Year:	Autumn - 2024	
First fall semester 2024–2025		
4. Description Preparation Date:	1/9/2024	
5. Available Attendance Forms: Mandatory attendance	Cuonpuncry	
6. Number of Credit Hours (Total) / Number of Units (Total)	2 theoretical + 3 practical /3.5 units	
7. Course administrator's name (mention all if more than one name)	Name: Dr. Rana Saadallah Aziz Name: M M .Osama Hossam Fadel Name: M.M. Shymiaa Ghanim Dawood	
8. Course Objectives	<p><b>Theoretical</b></p> <ul style="list-style-type: none"> <li>- Enabling the student to know the composition, origin and development of soil</li> <li>- Introducing the student to the physical, chemical and biological properties of soil</li> <li>- Introducing the student to some soil problems, such as salinity and alkalinity And how to treat it</li> </ul> <p><b>practical :</b></p> <ul style="list-style-type: none"> <li>- Enable the student to learn about collecting soil samples from the field</li> <li>How to prepare it for laboratory analysis and conduct the most important basic analyses For soil</li> </ul>	
9. Teaching and Learning Strategies	<p><b>My theory:</b></p> <ul style="list-style-type: none"> <li>1- Knowledge and understanding.</li> <li>2- Identifying the problem of salinity, the nature its treatment, and methods of living with it.</li> <li>3- Identify the ionic structure of salts.</li> <li>4- Identifying the salt phases of soils affected by salinity.</li> <li>5- The possibility of preparing a salt map for areas affected by salinity in order to develop scientific programs for their reclamation. Study.</li> </ul> <p><b>practical:</b></p> <ul style="list-style-type: none"> <li>- Adapting to teamwork to reveal skills.</li> <li>- Assignment of tasks and reports for each committee.</li> </ul>	
10. Course Structure		

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2 Theoretical	a1: The student demonstrates concepts of Soil science	Introduction to science concepts of the soil	The salib audio style Write on Chalkboard style Direct dialogue	Short exams, assignments, discussions
					
2	3 practical	B 2 : The student identifies soil core	Move the soil and collect samples from field	Assigning tasks And report.	assignments, discussions
		a2: The student gets to know Soil formation	Origin and development of Soil	The salib audio style Write on Chalkboard style Direct dialogue	Short exams, assignments, discussions
3	2 Theoretical	c1: Theoretical The student learns about the processes of soil formation	Theoretical Soil formation processes	Theoretical The salib audio style Write on Chalkboard style Direct dialogue	Short exams, assignments, discussions
		a13: The student gets to know Description of soil section	Description of soil section	Assigning tasks And report.	
4	2 Theoretical	b1: The student identifies a tissue of the soil	Determine soil texture	Assigning tasks And report.	assignments, discussions
		a3: The student explains the properties of Soil physical	Physical properties of soil	Theoretical The salib audio style Write on	Short exams,

				Chalkboard style Direct dialogue	
	3 practical	b4: The student measures the degree interaction the soil	Estimating degree of interaction	Assigning tasks And report.	assignments, discussions
	2 Theoretical	a4: The student learns about construction the soil	TSoil building	The salib audio style Write on Chalkboard style Direct dialogue	Short exams,
5					
	3 practical	b5: The student measures a ratio Carbonates in soil	Estimation of calcium carbonate in the soil	Assigning tasks And report.	assignments, discussions
	2 Theoretical	a5: The student gets to know Soil temperature	soil temperature	The salib audio style Write on Chalkboard style Direct dialogue	Short exams,
6					
	3 practical	b6: The student measures a ratio Carbonates and bicarbonates In the soil	Determination of carbonates and bicarbonates in the soil	Assigning tasks And report.	assignments, discussions
7			First semester exam		
8	2	Theoretical	a6: The student distinguishes properties Chemical soil	Colloids and properties Chemical soil	The salib audio style Write on Chalkboard style Direct dialogue
					Short exams,

	3 practical	b8:The student measures a ratio Sodium and potassium	Determination of sodium and potassium	Assigning tasks And report.	assignments, discussions
9	2 Theoretical	a7: The student explains Organic colloids	Organic colloids	The salib audio style Write on Chalkboard style Direct dialogue	Short exams,
	3 practical	b9:The student measures the material Membership	Estimation of soil organic matter	Assigning tasks And report.	assignments, discussions
10	2 Theoretical	a8: The student is familiar with the properties of soil Biological	TSoil biological properties	The salib audio style Write on Chalkboard style Direct dialogue	Short exams,
	3 practical	c3:The student discovers vehicles Humic	Estimation of humic compounds In the soil	Assigning tasks And report.	assignments, discussions
11	2 Theoretical	a9: The student learns about the salinity and alkalinity of soil	Salinity and alkalinity in the Soil	The salib audio style Write on Chalkboard style Direct dialogue	Short exams,
	3 practical	a14: The student determines salinity	Estimation of soil salinity	Assigning tasks And report.	assignments, discussions
	2 Theoretical	a10:Theoretical The student is familiar with the effect of salinity on agricultural	Theoretical The effect of soil salinity on Agricultural Production	My theory: The salib Audio style Write on Chalkboard style	Short exams, assignments, discussions

12		production		Direct dialogue Assigning tasks And report	
	3 practical	b10: The student measures the soil capacity Cationicity	Estimation of soil cation capacity		
13	2 Theoretical	A11: Important nutrients In the soil	Irrigation water classification systems	The salib audio style Write on Chalkboard style Direct dialogue	Short exams,
	3 practical	C4: Extracting ready-made elements From the soil	Determination gypsum in soil	Assigning tasks And report.	assignments, discussions
	2 Theoretical	A12: The student learns about phosphorus and potassium in the Soil	Phosphorus and potassium In the soil	The salib audio style Write on Chalkboard style Direct dialogue	Short exams,
14					
	3 practical	B11: The student measures phosphorus in the soil	Determination phosphorus in soil	Assigning tasks And report.	assignments, discussions
15			Second semester exam		

### III. Course Evaluation

	Evaluation methods	Evaluation date	Grade Relative	weight %
1	Theoretical final report + practical experience reports	Theoretical week 15, practical week 15	7 theoretical + 6 practical	13%
2	Short test (1) Quiz	week (3)	4 theoretical + 2 practical	6%

3	Exam Midterm (theoretical + practical)	week (9)	10 theoretical + 5 practical	15%
4	Short test (2) Quiz	week (12)	4 theoretical + 2 practical	6%
5	Final practical test	A week of practical exams	20	20%
6	Final theoretical test	The week of theoretical exams	40	100%
the total			100	100%

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Principles of Soil Science, written by Dr. Abdullah Ani (1982)
Main references (sources)	Land environmental chemistry, soil chemistry
Recommended books and references (scientific journals, reports...)	Al-Rafidain Agriculture Journal, Soil Science Journal
Electronic References, Websites	

Dr. Rana Saadallah Aziz  
Theoretical subject lecturer

Mr. Osama Hossam Fadel  
Mr. Shymiaa Ghanim Dawood  
Practical subject lecturer

Dr. Alaa Muhammad Abdullah  
Chairman of the Scientific Committee

Dr. Alaa Muhammad Abdullah  
Head of the Department of agricultural economy

## Course Description Form

1. Course Name:

Agricultural machines and equipment

2. Course Code:

AGME207

3. Semester / Year:

The second spring semester/first stage/2024-2025

4. Description Preparation Date:

1/2/2025

5. Available Attendance Forms:

in-person and online

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

75 hours (2 theoretical + 3 practical / 3.5 units

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

Name of Lecturer for Theory part: Mr. Layth Mahmood Yahya

Email: laithmy@uomosul.edu.iq

Name of Lecturer for practical part: Mr. Othman muayad mohammed tofeq

8. Course Objectives

- Identify the components and parts of agricultural tractors, starting with the engine and the main and auxiliary devices it contains.
- Clarifying the basics and principles of engineering sciences and their applications in various agricultural fields.
- Discussing every type of agricultural equipment and machinery for the production of agricultural crops (in terms of structure and function), starting from plowing the soil and preparing the seedbed, passing through the stages of serving the growing crop, ending with harvesting operations and the subsequent processes through which these agricultural products are prepared, whether for consumption or Storage.
- Making the necessary adjustments to agricultural machines in order to obtain the optimal use of those machines in order to reach the intended use of those machines.
- The ability to maintain, maintain and repair agricultural equipment.
- The ability to disassemble and install these machines.
- The ability to manage agricultural equipment in the field.
- The ability to connect machines to the agricultural puller and carry out organizing and calibrating operations for them in a way that suits the agricultural process required to be performed with the agricultural machine.

9. Teaching and Learning Strategies

- Interactive lecture
- Brainstorming

- Dialogue and discussion
- Field Training
- Practical exercises
- Field project
- Self-education

## 10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2 Theoretical	a2: Introducing the student to the methods of transmitting motion in agricultural machines and machinery and the means used to transmit motion  The student acquires knowledge and concepts related to the methods and means used in transporting and transforming movement in agricultural tractors	Methods and means used in transporting and shifting the movement of agricultural pullers	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Semester exam 1, final exam
	3 Practical	b1: Calculating the movement transfer ratio in and the methods used in transferring and converting movement in agricultural pullers  The student should be able to identify the methods used in transporting and shifting the movement of agricultural tractors	Mathematical relations for calculating the movement transfer ratio in and the methods used in transferring and converting movement in agricultural tractors	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Short practical test 1
2	2 Theoretical	a2: Introducing the student to the agricultural tractor, its types	Agricultural tractor types and specifications and field traffic	Interactive lecture, brainstorming, dialogue	Semester exam 1, final exam

		<p>and specifications</p> <p>The student acquires knowledge and concepts related to the agricultural tractor, its types and specifications</p>	system using GPS system in precision agriculture	and discussion, self-learning	
	3 Practical	<p>b2: Training the student to drive an agricultural tractor</p> <p>The student must be able to operate and drive the agricultural tug in a scientific and correct manner</p>	<p>Driving an agricultural tractor</p> <p>And display automatic driving system</p>	<p>Interactive lecture, brainstorming, dialogue and discussion, self-learning</p>	Short practical test1
3	2 Theoretical	a2: The student explains the foundations of design and operation of compression and spark engines, the foundations of design and operation of four- and two-stroke engines.	Internal combustion engines	<p>Interactive lecture, brainstorming, dialogue and discussion, self-learning</p>	Semester exam 1, final exam
		<p>The student acquires knowledge and concepts related to internal combustion engines</p> <p>b4: The student shows the component parts of the engine</p> <p>The student should be able to disassemble and install engine parts</p>	The main and auxiliary parts of the engine	<p>Interactive lecture, brainstorming, dialogue and discussion, self-learning</p>	Short practical test1
4	2 Theoretical	a2: The student shows the timing device, the pilot wheel, the crankshaft, and the power stages in different	Timing device, pilot wheel, crankshaft and power stages in different sequences	<p>Interactive lecture, brainstorming, dialogue and discussion, self-learning</p>	Semester exam 1, final exam

		sequences		
		The student acquires knowledge and concepts related to the timing device, pilot wheel, crankshaft, and power stages in different sequences		
3	Practical	b1: Calculates the working cylinder volume of the engine  The student should be able to evaluate the functions of working parts in agricultural equipment and machinery	Technical terminology of the engine and the mathematical relationship of the engine	Interactive lecture, brainstorming, dialogue and discussion, self-learning
5	2 Theoretical	a2: The student shows the fuel injection device for compression engines  The student acquires knowledge and concepts related to the fuel injection device for compression engines	Fuel injection device for compression engines	Interactive lecture, brainstorming, dialogue and discussion, self-learning
	3 Practical	b3: Repair and maintenance of the fuel injection system in agricultural tractors  The student should be able to identify faults in the agricultural tractor engine	Fuel injection system in agricultural tractors and its maintenance	Interactive lecture, brainstorming, dialogue and discussion, self-learning
6	2 Theoretical	a2: The student learns about the lubrication device and the cooling device	Lubrication device and cooling device in agricultural pullers	Interactive lecture, brainstorming, dialogue and discussion, self-learning

		<p>in agricultural tractors</p> <p>The student acquires knowledge and concepts related to the lubrication device and the cooling device</p>		self-learning	
	3 Practical	<p>b3: Repair and maintenance of the water-cooling system and the lubrication system in agricultural pullers</p> <p>The student should be able to identify faults in the agricultural tractor engine</p>	<p>The cooling and lubrication system in the agricultural tug and its maintenance</p>	<p>Interactive lecture, brainstorming, dialogue and discussion, self-learning</p>	Short practical test1
7	2 Theoretical	<p>a2: The student shows the transmission devices in the agricultural tug (clutch and gearbox).</p> <p>The student acquires knowledge and concepts related to the transmission devices in the agricultural tug (clutch and gearbox)</p>	<p>Transmission devices in the agricultural tug and gearbox.</p>	<p>Interactive lecture, brainstorming, dialogue and discussion, self-learning</p>	Semester exam 1, final exam
	3 Practical	<p>b3: Repair and maintenance of transmission devices in agricultural pullers (clutch and gearbox in agricultural pullers)</p> <p>The student should be able to monitor safety conditions when</p>	<p>Maintenance and repair of transmission devices (clutch - gearbox)</p>	<p>Interactive lecture, brainstorming, dialogue and discussion, self-learning</p>	Short practical test1

		working on agricultural equipment and machinery			
8	2	a2: The student shows the transmission devices in the agricultural tractor (the differential device and the vertical device)  The student acquires knowledge and concepts related to the transmission devices in the agricultural tractor (the differential device and the vertical device)	Transmission devices in the agricultural tug (differential device and vertical device)	Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, and self-learning	short exams, assignment of duty, discussions
		b3: Repair and maintenance of transmission devices in agricultural pullers (differential device and vertical device) in agricultural pullers  The student should be able to choose the appropriate plowing method according to the conditions and nature of the field to be plowed	Maintenance and repair of transmission devices (differential and vertical devices)	Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, and self-learning	short exams, assignment of duty, discussions
9	2	c3: The student shows the power transmission devices in the agricultural tractor  The student acquires knowledge and concepts related to power transmission devices in agricultural tractors	Power transmission devices in agricultural pullers	Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, and self-learning	short exams, assignment of duty, discussions

	3 Practical	b3: Operating and maintaining power transmission devices in agricultural tractors The student should be able to choose the appropriate plowing method according to the conditions and nature of the field to be plowed	Power transmission parts (operation and maintenance)	Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, and self-learning	short exams, assignment of duty, discussions
10	2 Theoretical	c3: The student shows the primary and secondary soil preparation and preparation equipment The student acquires knowledge and concepts related to primary soil preparation and preparation equipment	Primary and secondary soil preparation and preparation equipment	Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, and self-learning	short exams, assignment of duty, discussions
	3 Practical	b1: Identifying plowing methods and types, applying mathematical relationships to calculate theoretical productivity, actual productivity, and field efficiency of plows. The student should be able to calculate the theoretical and actual productivity and field efficiency of tillage equipment	Methods of plowing with plows, their types, and mathematical and computational applications for plowing equipment	Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, and self-learning	short exams, assignment of duty, discussions

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11	2	c3: Scientific visit The student acquires knowledge and concepts related to secondary and special soil preparation and preparation equipment The student should be able to monitor safety conditions when working on agricultural equipment and machinery	Scientific visit	Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, and self-learning	short exams, assignment of duty, discussions
	3 Practical	a2: Identifying the methods of netting and connecting agricultural machinery to the agricultural puller The student should be able to organize and connect agricultural machinery to the agricultural puller	Methods of netting and connecting agricultural machinery to the agricultural puller	Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, and self-learning	short exams, assignment of duty, discussions
12	2	a2: The student shows the seeding and agricultural equipment The student should be able to know seed and agricultural equipment	Seeding and farming equipment	Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, and self-learning	short exams, assignment of duty, discussions
	3 Practical	b2: Laboratory and field organization of grain seeds The student should be able to organize grain seeds	Calibrating and maintaining seed and agricultural equipment	Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, and self-learning	short exams, assignment of duty, discussions
13	2	a1: The student is introduced to fertilization equipment The student should be able to	Fertilization equipment	Interactive lecture, brainstorming, dialogue and discussion, field training,	short exams, assignment of duty, discussions

		know fertilization equipment		practical exercises, and self-learning	
	3 Practical	b1: Calculates and organizes the amount of fertilizer needed per unit area The student must be able to operate and organize fertilization equipment	Calibration and maintenance of fertilization equipment	Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, and self-learning	short exams, assignment of duty, discussions
14	2 Theoretical	a1: The student is introduced to the hydraulic sprinkler Pneumatic, disinfectants and mechanical control The student acquires knowledge and concepts related to pest control equipment	Control equipment	Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, and self-learning	short exams, assignment of duty, discussions
	3 Practical	b1: Calculates and regulates the amount of pesticide needed per unit area The student should be able to organize chemical control sprays	Calibrating and maintaining equipment	Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, and self-learning	short exams, assignment of duty, discussions
15	2 Theoretical	a2: The student learns about the combined grain harvester. The student should be able to know about harvesting equipment	Harvesting equipment	Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, and self-learning	short exams, assignment of duty, discussions
	3 Practical	b3: Sustaining and maintaining harvesting equipment The student must be able to operate harvesting equipment	Sustaining and maintaining harvesting equipment	Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, and self-learning	short exams, assignment of duty, discussions

## 11. Course Evaluation

	Evaluation methods	Evaluation date (week)	Grade	Relative weight %
1	Report 1	Week Four	2.5	2.5
2	Report 2	Week Five 2.5	2.5	2.5
3	Short test (1) Quiz	Week Six	2	2
4	Short Test (2) Quiz	Week Fourteen	2	2
5	Short Test (3) Quiz	Week Fifteen	1	1
6	Semester test (1)	sixth week	7.5	7.5
7	Semester test (2)	the eleventh week	7.5	7.5
8	final theoretical exam final semester exams 40 40	final semester exams	40	40
9	Practical field project	week fifteen	5	5
10	Field evaluation	weeks three and five	2	2
11	short practical tests (1) Quiz	the first week	1	1
12	short practical tests (2) Quiz	Week Four	0.5	0.5
13	Short practical test (3) Quiz	Week Fourteen	1	1
14	Direct drawings and homework	weeks 6, 8, 9, 10, 11, 12, and 13	5.5	5.5
15	Final practical exams	Final semester exams	20	20
Total	100		100%	100%

## 12. Learning and Teaching Resources

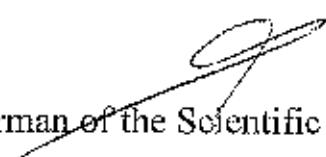
Required textbooks (curricular books, if any)	1- Agricultural tugs. Written by Dr. Abdel Salam Muhammad Ezzat and Lotfi Hussein Muhammad Ali, 2- Agricultural machines and machinery, written by Dr. Yassin Hashem Al-Tahan and Dr. Muhammad Jassim Al-Naama.
Main references (sources)	Agricultural mechanization (pullers and agricultural machines), written by Ahmed Al-Rai Imarn Suleiman and Sami Muhammad Younis.
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	



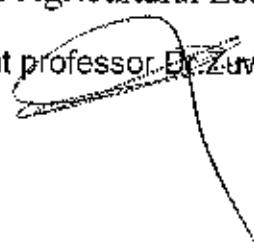
Teacher of Theoretical part  
Mr. Layth Mahmood Yahya



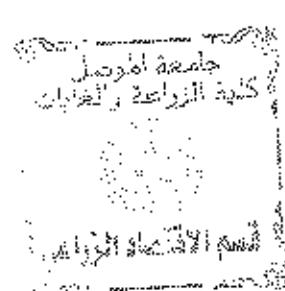
Teacher of practical part  
Mr. Othman muayad mohammed tofeq



Chairman of the Scientific Committee  
Professor Dr. Kais Nazem Ghazal

  
Head of Agricultural Economics

Assistant professor Dr. Zuwaid Fathi Abd



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كلية الزراعة  
قسم الاقتصاد الزراعي  
م. د. عزيز فتحي عبد

## Course description form

1. Course Name	Microeconomic theory 1
2. Grade Course Code	MIET248
3. Semester/Year	First Semester/Second Phase/2024-2025
4. Date this description was prepared	2024/9/1
5. Available forms of attendance	In-person + online
6. (of study hours (total) number of units (total Number	Theoretical hours: 30 hours / practical hours: 45 hours, number of units: 3.5 units
7. (Name of the course administrator (if more than one name is mentioned)	Dr. Ahmed Hashim Ali ahmadhashim1982@uomosul.edu.iq M.M. Mohammed Hamid Ahmed mohammedhamid191@uomosul.edu.iq M.M. Farah Mohsen Ali Email: farah.mohsen@uomosul.edu.iq

### objectives Course :8

theoretical	practical
The student learns about the concept of - microeconomic theory	Definition of an individual's demand for a commodity and the law of negative slope demand s demand curve, the market 'Shift of an individual demand for a commodity
It shows the student the methods and mechanisms on which the assumptions of partial theory and the concept of the scarcity problem are based	Enable the student to draw the product supply curve, the shape of the supply curve, and the transition of the supply curve for a commodity
It explains to the student the method and assumptions of partial theory and how to analyze partial equilibrium and general equilibrium	The student becomes clear about the types of o reach equilibrium equilibrium and how t graphically and mathematically
The student solves the static method and the method in equilibriumdynamic met	Methods of transition in demand, supply and equilibrium
Definition of an individual's demand for a commodity and the law of negative slope demand	The student estimates the price elasticity of demand
Shift of an individual's demand curve, the market demand for a commodity	Arc elasticity is elasticity at a point
Product supply, the shape of the supply supply curve curve, and the transition of the s for a commodity	Point elasticity and analyzes the method of tal spending through elasticity measuring to
Shows the student the types of balance	The student applies the method of measuring income elasticity of demand
Methods of transition in demand, supply and equilibrium	cross elasticity of demand
The student estimates the price elasticity of demand	The price elasticity of supply and how to calculate each of them
Arc elasticity is elasticity at a point	Explains to the student the concept of total utility marginal utility graphically and
of Point elasticity and analyzes the method measuring total spending through elasticity	The consumer balance according to the traditional theory and how to reach the balance graphically and mathematically
Explains to the student income elasticity of	It shows the student how to use the law of diminishing marginal utility and the principle of

demand	rium graphically and consumer equilibrium mathematically
cross elasticity of demand	The effect of elasticity of demand on the quantities purchased of other goods, mathematically and graphically, and how to derive the demand curve according to the assumptions of utility theory
The price elasticity of supply and how to calculate each of them	substitution effect in the Explains to the student the consumer's move from one equilibrium point to another graphically and mathematically
Explains to the student the concept of total marginal utility utility and	It shows the student graphically the income effect of the consumer moving from one equilibrium point to another
The consumer balance according to the traditional theory and how to reach the balance graphically and mathematically	concept of The student learns about the co indifference curve theory graphically
It shows the student how to use the law of diminishing marginal utility and the principle of consumer equilibrium	The concept of the budget constraint line graphically and mathematically
et of elasticity of demand on the The effect of elasticity of demand on the quantities purchased of other goods, mathematically and graphically, and how to derive the demand curve according to the assumptions of utility theory	The student learns about the concept of consumer equilibrium according to the theory of indifference curves graphically
Explains to the student the substitution effect from one in the consumer moving equilibrium point to another	the consumer balances exchange and how according to the theory of indifference curves consumption -The student learns about the income curve and how to derive it graphically
It shows the student the income effect of the consumer moving from one equilibrium point to another	
The student learns about the concept of indifference curve theory	
Recognize the properties of indifference curves	
concept of budget constraint line The	
The student learns about the concept of consumer equilibrium according to the theory of indifference curves	
Exchange and how the consumer balances according to the theory of indifference curves	
-o incomeThe student learns about the consumption curve and how to derive it graphically	
And the Angel curve	
price curve, and how to -The consumption derive the consumer demand curve according to the theory of indifference curves	
Shows the student the total, average and marginal output	
The law of diminishing returns and stages of production	
The shape of the average product and marginal product curves	
Explains to the student isoquants	
And the technical marginal rate of substitution	
The characteristics of isoquants and isoquants s the student's expansion pathDetermine	



And the replacement of productive elements  
And constant, increasing and decreasing  
returns to scale

## 9. Teaching and learning strategies

The strategy	discussion, stating the hypotheses of Interactive lecture, brainstorming, dialogue and the partial theory Interactive lecture; brainstorming, dialogue and discussion in analyzing hypotheses Interactive lecture, brainstorming, clarifying markets, hypotheses and their types ing, and comparison between demand, supply, and Interactive lecture, brainstorm markets Interactive lecture, brainstorming, dialogue, and participation in estimating and deriving the display function Interactive lecture, brainstorming, dialogue, and participation in deriving the demand unctionf Interactive lecture, brainstorming, dialogue and discussion, assigning tasks and reporting Interactive lecture, brainstorming, dialogue and discussion, assigning tasks and reporting nking tasks and Interactive lecture, brainstorming, dialogue and discussion, assig reporting Interactive lecture, brainstorming and comparison between elasticity of demand and elasticity of costs Interactive lecture, brainstorming, dialogue and discussion ng tasks and Interactive lecture, brainstorming, dialogue and discussion, assigni reporting Interactive lecture, brainstorming, dialogue and discussion Hc is assigned the duty of drawing elasticities of demand and deriving the consumer demand curve, the consumption and price curves, and the consumption and income curves is assigned the task of solving an exercise Hc
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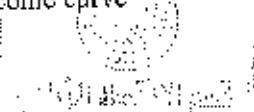
## Course structure: 10

the week	hours	learning Required outcomes	Name of the unit or topic	Learning method	Evaluation method
1	2	A1 The student learns the concept of about microeconomic theory B1 shows the student the methods and mechanisms on which the assumptions of partial theory and the concept of the scarcity problem are based	The concept of economic theory The problem of scarcity Markets and equilibrium functions	Auditory methods Style of writing blackboard on the Direct dialogue style Assigning tasks reporting and	Short exams Assignment of duty discussions
		C1 The student learns how to balance mathematically	Mathematical application of functions and equilibrium	Auditory methods writing Style of on the blackboard Direct dialogue style Assigning tasks reporting and	Short exams Assignment of duty discussions
2	2	B2 Explains to the student the method and hypotheses of partial theory	The theoretical curriculum of objective economics and calibrated economies	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks reporting and	Short exams Assignment of duty discussions
		D1 How to analyze partial equilibrium and general equilibrium C2 The student solves the static method and the dynamic method in equilibrium	Balance analysis	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks reporting and	Short exams Assignment of duty discussions
3	2	A2 Definition of an individual's demand for a commodity and the law of negative slope demand A3 Definition of the product supply curve	Demand and supply An individual's demand for a good	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks reporting and	Short exams Assignment of duty discussions
		B3 Shift of the individual demand curve, the market demand for a commodity C3 Product supply, the shape of the supply curve, shift of the supply and the curve for a good	The law of demand and the shift of an individual's demand curve Shift of the product supply	Auditory methods Style of writing on the blackboard Direct dialogue style	Short exams Assignment of duty discussions

			curve	Assigning tasks reporting and	
		B4 Shows the student the types of equilibrium	Balance Types of balance	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks reporting and	Short exams Assignment of duty discussions
2	Theoretical				
4	Practical3	C4 The student learns graphically and mathematically how to navigate demand, supply and equilibrium	Shift in demand, supply and equilibrium	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks reporting and	Short exams Assignment of duty discussions
2	Theoretical	B5 The student estimates the price elasticity of demand Arc elasticity is elasticity at a point Point elasticity	Measurement of elasticities Price elasticity demand of Arc elasticity and point elasticity	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks reporting and	Short exams Assignment of duty discussions
5	Practical3	D2 The student analyzes the method of measuring through total spending elasticity	Flexibility of points and total spending	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks reporting and	Short exams Assignment of duty discussions
2	Theoretical	B6 Explains to the student income elasticity of demand cross elasticity of demand	Types of price elasticities of demand and supply elasticities	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks	Short exams Assignment of duty discussions
6	Practical3	C5 How to calculate the price elasticity of supply and demand and their types	Income elasticity of demand , section-cross Price elasticity of supply	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks	Short exams Assignment of duty discussions

		B7 Explains to the student the concept of total utility and marginal utility	Consumer demand theory utility approach Total and utility marginal	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks reporting and	Short exams Assignment of duty discussions
7	Theoretical 2				
	Practical 3	C6 How the consumer balances according to and how traditional theory to reach balance graphically and mathematically	Consumer equilibrium	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks reporting and	Short exams Assignment of duty discussions
	Theoretical 2	B8 Shows the student how law of to use the diminishing marginal utility and the principle of consumer equilibrium	The law of diminishing marginal utility and the principle of equilibrium	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks reporting and	Short exams Assignment of duty discussions
8	Practical 3	C 7The effect of elasticity of demand on the quantities purchased of other goods, mathematically and graphically D3 How to derive the demand curve according to the assumptions of utility theory	Derive the individual demand curve The quantity of the other commodity purchased	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks reporting and	Short exams Assignment of duty discussions
	Theoretical 2	B9 Explains to the student the substitution effect in the consumer moving from one equilibrium point to another	The substitution effect , the income effect , and the shape of the demand curve	Auditory methods Style of writing on the blackboard dialogue Direct style Assigning tasks reporting and	Short exams Assignment of duty discussions
9	Practical 3	B10It shows the student the income effect of the consumer moving from one equilibrium point to another B1 The student distinguishes between the substitution effect and the income effect	Exercises on the effects of substitution and income	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks reporting and	Short exams Assignment of duty discussions

		A4 The student learns about the concept of indifference curve theory	Consumer demand theory introduction to indifference curves Definition of indifference curves	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks	Short exams Assignment of duty discussions
10	2 Theoretical	A5 Identify the properties of indifference curves The concept of budget constraint line C8 Learn graphically how to draw indifference curves and budget constraint lines	Properties of indifference curves Budget constraint line Exercises on drawing indifference curves and budget constraint lines	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks	Short exams Assignment of duty discussions
11	2 Theoretical	A6 The student learns about the concept of consumer equilibrium according to the theory of indifference curves	Consumer equilibrium in the theory of equalization intentions Exchange	Auditory methods Style of writing on the blackboard Dialogue Direct style Assigning tasks reporting and	Short exams Assignment of duty discussions
11	3 Practical	E2 The student distinguishes between and methods of exchange how the consumer balances according to the theory of indifference curves	Mathematical exercises and diagrams about consumer equilibrium according to modern theory	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks reporting and	Short exams Assignment of duty discussions
12	2 Theoretical	A7 student learns about The consumption - the income curve C9 How to derive it graphically, Engel curve price -and consumption curve B11 How to derive the consumer demand curve according to the theory of indifference curves	- Consumption income curve Engel curve Consumption and price curve Derive the consumer demand curve	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks reporting and	Short exams Assignment of duty discussions
	3 Practical	D4 The student compares distinguishes and the Engel curve, the price curve, -consumption -and the consumption	Mathematical and applied exercises on derivation Engel curve	Auditory methods Style of writing on the blackboard	Short exams Assignment of duty discussions

		income curve 	Consumption and price curve And the consumer demand curve	Direct dialogue style Assigning tasks reporting and	
12	Theoretical	B12 Explains to the student the total, average, and marginal product, the law of diminishing returns, and the stages of production C10 Figure of the curve of average product and marginal product	Production theory production with one variable (input) Total, average and marginal output Stages of production	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks Assign reporting and	Short exams Assignment of duty discussions
13	Practical3	D5 The student compares and distinguishes between the stages of production E3 distinguishes between the derivatives of the production function	Exercises on the derivatives of the production function graphically and mathematically Define production stages graphically	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks reporting and	Short exams Assignment of duty discussions
14	Theoretical	B13 Shows the student isoquants And the technical marginal rate of substitution	Production using two inputs isoquant curve : Technical marginal rate of substitution	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks reporting and	Short exams Assignment of duty discussions
14	Practical3	J6 The student analyzes the properties of isoquants and isoquants	Properties of isoquant curves Isocost curves	Auditory methods Style of writing on the blackboard dialogue Direct style Assigning tasks reporting and	Short exams Assignment of duty discussions
15	Theoretical	B14 sets the student's path of expansion How to replace productive elements And constant, increasing and decreasing returns to scale	Product balance Expansion path Replace elements Constant, increasing and decreasing returns to scale	Auditory methods Writing style on the blackboard Direct dialogue style Assigning tasks reporting and	Short exams Assignment of duty discussions
	Practical3	B15 The student learns how to determine the path	Mathematical and graphic	Auditory methods Writing style on	Short exams Assignment

	of expansion D7 The student compares the types of yield by volume	exercises on product balance Expansion path Replace elements Constant, increasing and decreasing returns to scale	the blackboard Direct dialogue style Assigning tasks reporting and	of duty discussions
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Course evaluation		appointment Calendar a week	Class	% Relative weight
T	Calendar methods			
1	<u>Final theoretical + report</u>	15-1 My theory week	5	5
2	<u>Quiz Short test 1</u>	Week 3	5	10
3	<u>Theoretical Midterm test and practical</u>	Week 9	30	15
4	<u>Short test Quiz 2</u>	Week 12	5	10
5	<u>Final practical test</u>	Practical exam week	20	20
	<u>Final theoretical test</u>	A week of theoretical exam	40	40
	<u>the total</u>	100		100

#### Learning and teaching resources

**Unit Economics Theory, Dominic Salvatore**

**Introduction to Microeconomics, Dr. Muhammad Ahmad Effendi, 2012**

**Microeconomic Theory, Ahmed Zubair Janta**

**Lectures in Agricultural Production Economics, Dr. Khaled Al-Ruwais, King Saud University**

The theoretical subject teacher

Dr. Ahmed Ishaq Ali

the practical subject teacher

M.M. Mohamed Hamed Ahmed

the practical subject teacher

M.M. Farah Mohsen Ali



Chairman of the Scientific Committee

Prof. Dr. Alaa Muhammad Abdullah

Head of the Agricultural Economics Department

Prof. Dr. Alaa Muhammad Abdullah

## Course description form

1. Course Name	Microeconomic theory 2		
2. Code Course Code	MIET249		
3. Semester Year	Second Semester/Second Phase/2024-2025		
4. Date this description was prepared	2025/2/1		
5. Available forms of attendance	In-person + online		
6. (of study hours (total)/number of units (total Number	Theoretical hours: 30 hours / practical hours: 45 hours, number of units: 3.5 units		
7. (Name of the course administrator (if more than one name is mentioned)	Dr. Ahmed Hashim Ali <a href="mailto:ahmedhashim1982@uomosul.edu.iq">ahmedhashim1982@uomosul.edu.iq</a> M.M. Mohammed Hamid Ahmed <a href="mailto:mohammedhamid91@uomosul.edu.iq">mohammedhamid91@uomosul.edu.iq</a> M.M. Farah Mohsen Ali Email: <a href="mailto:sarah.mohsen@uomosul.edu.iq">sarah.mohsen@uomosul.edu.iq</a>		
8. objectives Course	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <b>:theoretical</b> <p>The student learns about the concept of production costs Shows the student unit cost curves in the short run Explains to the student unit cost curves in the long run Explains to the student the shape of the total cost curve in the long run Explains to the student the economic applications of cost functions Shows the student the price and output under competitive conditions the assumptions of The student learns about the competitive market How to balance the enterprise in the competitive market in the short term -The student learns how to calculate short term profits and losses in a competitive market The student learns about the supply curve of a product in the short run in a competitive market It shows the student the price and output in a pure monopoly market The student learns about the assumptions of a monopoly market How to derive marginal revenue and elasticity curves run -c shortExplains to the student th</p> </td> <td style="width: 50%; vertical-align: top;"> <b>:practical</b> <p>run cost curves geometrically-How to derive short How to derive the shapes of the curve of average costs and marginal costs in the long run Economic applications of economic derivatives of costs production How to derive cost functions from functions How to balance the establishment in the short term in the competitive market How the establishment is balanced graphically in the long run in the competitive market The student differentiates between industries with and increasing costs in a fixed, decreasing competitive market graphically and economically The student distinguishes between the different organized ways a monopoly market is How to reach equilibrium graphically in the short run under conditions of monopolistic competition run equilibrium -How the product reaches long graphically under conditions of monopolistic competition How to draw the establishment's demand with a variable factor How to draw the market supply curve How to draw the enterprise and market demand hicallycurve graph product curve and how to -How to draw the factor factor curve-draw the marginal cost.</p> </td> </tr> </table>	<b>:theoretical</b> <p>The student learns about the concept of production costs Shows the student unit cost curves in the short run Explains to the student unit cost curves in the long run Explains to the student the shape of the total cost curve in the long run Explains to the student the economic applications of cost functions Shows the student the price and output under competitive conditions the assumptions of The student learns about the competitive market How to balance the enterprise in the competitive market in the short term -The student learns how to calculate short term profits and losses in a competitive market The student learns about the supply curve of a product in the short run in a competitive market It shows the student the price and output in a pure monopoly market The student learns about the assumptions of a monopoly market How to derive marginal revenue and elasticity curves run -c shortExplains to the student th</p>	<b>:practical</b> <p>run cost curves geometrically-How to derive short How to derive the shapes of the curve of average costs and marginal costs in the long run Economic applications of economic derivatives of costs production How to derive cost functions from functions How to balance the establishment in the short term in the competitive market How the establishment is balanced graphically in the long run in the competitive market The student differentiates between industries with and increasing costs in a fixed, decreasing competitive market graphically and economically The student distinguishes between the different organized ways a monopoly market is How to reach equilibrium graphically in the short run under conditions of monopolistic competition run equilibrium -How the product reaches long graphically under conditions of monopolistic competition How to draw the establishment's demand with a variable factor How to draw the market supply curve How to draw the enterprise and market demand hicallycurve graph product curve and how to -How to draw the factor factor curve-draw the marginal cost.</p>
<b>:theoretical</b> <p>The student learns about the concept of production costs Shows the student unit cost curves in the short run Explains to the student unit cost curves in the long run Explains to the student the shape of the total cost curve in the long run Explains to the student the economic applications of cost functions Shows the student the price and output under competitive conditions the assumptions of The student learns about the competitive market How to balance the enterprise in the competitive market in the short term -The student learns how to calculate short term profits and losses in a competitive market The student learns about the supply curve of a product in the short run in a competitive market It shows the student the price and output in a pure monopoly market The student learns about the assumptions of a monopoly market How to derive marginal revenue and elasticity curves run -c shortExplains to the student th</p>	<b>:practical</b> <p>run cost curves geometrically-How to derive short How to derive the shapes of the curve of average costs and marginal costs in the long run Economic applications of economic derivatives of costs production How to derive cost functions from functions How to balance the establishment in the short term in the competitive market How the establishment is balanced graphically in the long run in the competitive market The student differentiates between industries with and increasing costs in a fixed, decreasing competitive market graphically and economically The student distinguishes between the different organized ways a monopoly market is How to reach equilibrium graphically in the short run under conditions of monopolistic competition run equilibrium -How the product reaches long graphically under conditions of monopolistic competition How to draw the establishment's demand with a variable factor How to draw the market supply curve How to draw the enterprise and market demand hicallycurve graph product curve and how to -How to draw the factor factor curve-draw the marginal cost.</p>		

<p>market equilibrium in a monopoly The student learns graphically about the run equilibrium from the aggregates -short the approach and the marginal approach monopoly market</p>
<p>The student learns about the monopolist's affecting it in the equilibrium and the factors long run</p>
<p>The student learns about the concept of a monopolistic competition market and its assumptions</p>
<p>The student recognizes the term oligopoly</p>
<p>The student distinguishes between the broken demand curve model, the central cartel market sharing and price leadership model graphically and economically</p>
<p>It explains to the student how to price and employ the factors of production in a perfectly competitive market</p>
<p>It shows the student how to maximize profits nations and use the least expensive combi</p>



## 9. Teaching and learning strategies

<b>The strategy</b>	<p>Interactive lecture: brainstorming, dialogue and discussion, explaining the types of the short and long terms costs and their derivatives in</p>
	<p>The interactive lecture is brainstorming, dialogue and discussion on market analysis and balance in each market</p>
	<p>Interactive lecture, brainstorming, clarifying the hypotheses of a perfectly competitive market</p>
	<p>brainstorming, and comparison between different markets Interactive lecture</p>
	<p>Interactive lecture, brainstorming, dialogue, and participation in estimating the equilibrium in the competitive market in the short term</p>
	<p>-n in estimating the long Interactive lecture, brainstorming, dialogue, and participation term equilibrium in the competitive market</p>
	<p>Interactive lecture, brainstorming, dialogue and discussion, assigning tasks and reporting</p>
	<p>run -Interactive lecture, brainstorming, dialogue and discussion, and estimating short</p>
	<p>in a monopoly market equilibrium</p>
	<p>Interactive lecture, brainstorming, dialogue and discussion, assigning tasks and reporting</p>
	<p>Interactive lecture, brainstorming and comparison between the competition market and the monopoly market</p>
	<p>dialogue and discussion</p>
	<p>Interactive lecture, brainstorming, dialogue and discussion, assigning tasks and reporting</p>
	<p>Interactive lecture, brainstorming, dialogue and discussion</p>
	<p>the He is assigned the duty of developing several points, supported by diagrams, about differences between the competitive market, the monopoly market, and the</p>

monopolistic competition market

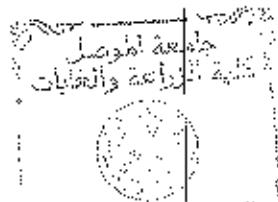
He is assigned the task of solving an exercise

#### 10. Course structure

The week	Topics	Required learning objectives	Name of the unit or topic	Learning method	Evaluation method
1	Theoretical 2	A1 The student learns about concept of production costs B1 shows the student the unit cost curves in the short run	Production costs run unit -Short cost curves	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Short exams Assignment of duty discussions
		C1 How to derive run cost curves -short geometrically C2 How to derive mathematically	Geometric derivation of run unit -short curves cost Mathematical derivation	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Short exams Assignment of duty discussions
2	Theoretical 2	B2 Explains to the student unit cost curves in the long run	run unit -I.long cost curves	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Short exams Assignment of duty discussions
		C3 How to derive shapes of the the run average -long costs and marginal costs curves C4 Economic applications of economic derivatives of costs	The shape of the curve of average costs and marginal costs in the long run	Auditory methods Style of writing on the blackboard dialogue Direct style Assigning tasks and reporting	Short exams Assignment of duty discussions
3	Theoretical 2	B3 Explains to the student the shape of the total cost curve in the long run C5 Explains to the student the economic applications of cost functions	run total -Long cost curve Production functions and derivation of cost curves	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Short exams Assignment of duty discussions
		B4 How to derive cost functions from production functions C6 The student learns the	Mathematical applications and exercises on production functions and deriving cost	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and	Short exams Assignment of duty discussions

		mathematical application of economic derivatives	curves	reporting	
	2 Theoretical	B5 Shows the student price and output under competitive conditions A2 The student learns about the assumptions of the competitive market	Price and output Under monopoly conditions Defining competition and setting price	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Short exams Assignment of duty discussions
4	Practical3	B6 balance How to the establishment in the competitive market in the short term D1 The student explains how a firm -can achieve short run equilibrium in a competitive market	Equilibrium of the establishment in the short run: Aggregates approach competitive ) (market	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Short exams Assignment of duty discussions
	2 Theoretical	B7 How to balance the establishment in the short run in the competitive market A2 student The learns how to term -calculate short profits and losses in a competitive market	Equilibrium of the firm in the short run: marginal approach competitive ) (market term profit -Short and loss	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Short exams Assignment of duty discussions
5	Practical3	D2 The student distinguishes between the establishment's equilibrium from the totals approach and the marginal approach	Practical examples and mathematical exercises on the establishment's equilibrium in the short run: the marginal approach and the totals approach competition ) (market	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks	Short exams Assignment of duty discussions
6	2 Theoretical	A3 The student learns about the supply curve of a product in the short run in a competitive market	run supply -Short curve Equilibrium of the firm in the long run competitive ) (market	Auditory methods Style of writing on blackboard the Direct dialogue style Assigning tasks	Short exams Assignment of duty discussions
	Practical3	C7 How to	Practical	Auditory methods	Short exams

		graphically balance the establishment in the long run in the competitive market	examples and mathematical exercises on the term -long balance of the establishment	Style of writing on the blackboard Direct dialogue style Assigning tasks	Assignment of duty discussions
	2	D3 The student differentiates between industries with fixed decreasing, and increasing costs in a competitive market graphically and economically	Increasing cost industries Fixed cost industries Decreasing cost industries in competitive market	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Short exams Assignment of duty discussions
7	Practical 3	E1 The student distinguishes between industries with fixed, decreasing, and increasing costs in a competitive market graphically and economically	Practical and mathematical examples of Increasing cost industries Fixed cost industries Decreasing cost industries in competitive market	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Short exams Assignment of duty discussions
	2	B8 Shows the student the price and output in a pure monopoly market A4 The student learns about the assumptions of a monopoly market A 5 The student learns about the marginal revenue curve	Price and output under monopoly conditions Definition of monopoly Marginal revenue curve and elasticity	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Short exams Assignment of duty discussions
8	Practical 3	C8 How to derive marginal revenue the and elasticity curves	Mathematical applications and how to derive marginal revenue from elasticity of demand	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Short exams Assignment of duty discussions
	2	B9 Explains to the student the short equilibrium in a monopoly market C9 The student learns graphically about the short equilibrium from the aggregates approach and the marginal	run -Short equilibrium under monopoly conditions: an aggregates approach run -Short equilibrium under monopoly conditions: the	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Short exams Assignment of duty discussions
9	Theoretical				

		approach to the monopoly market	marginal approach		
		D4 The student compares the equilibrium in a competitive market and a monopoly market	Mathematical examples of run -short equilibrium under monopoly conditions:	Auditory methods Style of writing on the blackboard Direct dialogue style tasks and Assigning reporting	Short exams Assignment of duty discussions
	Practical3	E2 The student distinguishes -between the short run equilibrium from the aggregate approach and the marginal approach	Introduction to aggregates run -Short equilibrium under monopoly conditions: the marginal approach		
10	Theoretical2	A6 The student identifies the monopolist's equilibrium and the factors affecting it in the long run	run -Long equilibrium under monopoly conditions	Auditory methods writing on Style of the blackboard Direct dialogue style Assigning tasks	Short exams Assignment of duty discussions
	Practical3	E3 The student distinguishes between the different ways a monopoly market is organized	Monopoly regulation (price control, lump sum (tax, unit tax	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks	Short exams Assignment of duty discussions
	Theoretical2	A7 The student learns about the concept of a monopolistic competition market assumptions and its	Price and output under conditions of monopolistic competition Definition of monopolistic competition	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Short exams Assignment of duty discussions
11	Practical3	C10 How to reach equilibrium graphically in the short run under conditions of monopolistic competition	run -Short equilibrium under conditions of monopolistic competition	Auditory methods Style of writing on the blackboard dialogue Direct style Assigning tasks and reporting	Short exams Assignment of duty discussions
12	Theoretical2	A 8The student gets to know the term oligopoly B10 How the product reaches run equilibrium -long graphically under conditions of monopolistic competition	run -Long equilibrium under conditions of monopolistic competition Definition of oligopoly	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Short exams Assignment of duty discussions
	Practical3	F4 Mathematical and	Mathematical and	Auditory methods	Short exams

		graphical distinction run and -short or run equilibria-long under conditions of monopolistic competition	graphical applications of -and long -short run equilibrium under conditions of monopolistic competition	Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Assignment of duty discussions
	2 Theoretical	A9 The student recognizes the broken demand curve model, the central cartel model, sharing and market price leadership graphically and economically	Broken demand curve model Central cartel model Market sharing cartel model Leadership model in price setting	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Short exams Assignment of duty discussions
13	Practical3	C11 The student derives mathematically and the graphically refracted demand curve E5 The student distinguishes graphically and mathematically the central between model, the cartel market sharing cartel model, and the price leadership model	Mathematical applications and examples of the broken demand curve model Central cartel model Market sharing cartel model Leadership model in price setting	Auditory methods writing on Style of the blackboard Direct dialogue style Assigning tasks and reporting	Short exams Assignment of duty discussions
	2 Theoretical	B11 Explains to the student how to price and employ the factors of production in a perfectly competitive market	Pricing and employment of factors of production Perfect competition in product markets and factors of production	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Short exams Assignment of duty discussions
14	Practical3	C12 How to draw a facility's demand curve with a variable factor C13 How to draw the market supply curve	Practical applications on pricing and employment of production factors in product markets and production factors	methods Auditory Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Short exams Assignment of duty discussions
15	2 Theoretical	B12 It shows the student how to maximize profits and use the least expensive combinations	Competition in the productive factor market and monopoly in the product market	Auditory methods Writing style on Direct the blackboard dialogue style Assigning tasks and reporting	Short exams Assignment of duty discussions

	C14 How to draw enterprise and the market demand curve graphically D5 How to draw the product-worker curve and how to draw the marginal cost curve for the and worker differentiate between them	Mathematical applications and economic examples of competition in the factor productive market and monopoly in the product market	Auditory methods Writing style on Direct the blackboard dialogue style Assigning tasks and reporting	Short exams Assignment of duty discussions
Practical3				



Course evaluation		Calendar a week -appointment	Class	Relative weight %
T	Calend ar metho ds			
1	Final theoret ical report	15-1 My theory week	5	5
2	Quiz Short test 1	Week 3	5 5	10
3	Midterm test Theoretical and practical	Week 9	10 5	15
4	Short test 2	Week 12	5 5	10
5	Quiz Final practic al test	Pract ical exam week	20	20
	Final theoret ical test	A week of theor etical exam	40	40
	the total		100	100

#### Learning and teaching resources

Unit Economics Theory, Dominic Salvatore

Introduction to Microeconomics, Dr. Muhammad Ahmad Effendi, 2012

Microeconomic Theory, Ahmed Zubair Jaata

Lectures in Agricultural Production Economics, Dr. Khaled Al-Ruwais, King Saud University

The theoretical subject teacher

Dr. Ahmed Hashim Ali

the practical subject teacher

M.M. Mohamed Hamed Ahmed

the practical subject teacher

M.M. Farah Mohsen Ali

Chairman of the Scientific Committee

Prof. Dr. Qais Nazim Ghazal,

Head of the Agricultural Economics Department

Asst. Prof. Dr. Zwaid Fathy Abdle

## Course description form

1.	Course Name					
	Principles of agricultural statistics					
2.	Course Code					
	AGST250					
3.	Semester Year: Annual					
	2025 / stage Second / semester Second					
4.	Date this description was prepared					
	1/2/2025					
5.	Available forms of attendance					
	In person					
6.	(Number of study hours (total)/number of units (total)) theoretical hours / 3 practical hours (5 hours) / 3.5 units 2					
7.	Name of the course administrator (if more than one name is mentioned)					
	Prof. Dr. Alaa Muhammad Abdullah	M.M . Farah Muhsen Ali				
8.	Course objectives					
	<ul style="list-style-type: none"> <li>• statistics Introducing the student to agricultural</li> <li>• Preparing agricultural cadres capable of familiarity with the means of preparing research and knowing the arithmetic mean</li> <li>• <b>-for the purpose of self The skill of conducting field application development and personal development, and the skill of using educational methods</b></li> <li>• to advance the reality of economics, which the the student Preparing department is interested in addressing in its study programs</li> </ul>					
	Learning strategies Teaching and					9
	<ul style="list-style-type: none"> <li>- Interactive lecture</li> <li>- Brainstorming</li> <li>- Dialogue and discussion</li> <li>- Field Training</li> <li>- Practical exercises</li> <li>- Field project</li> <li>- education-Sclf</li> </ul>					
						Course structure 10

Evaluatio n method	Teachin g method	Name of the unit/topic	Required learning outcomes	hours	the week

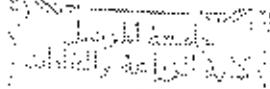
	Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self learning	Time series The concept of - time series Time series - analysis Types of models -	A1 defines time series	Theoretical
1	Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self learning	Identify statistics - and its importance Clarifying the stages of statistical research Explaining the relationship of statistics to other sciences	A2Learn about the basics of agricultural statistics	Practical
	Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self learning	Components of the The -time series: 1 general trend First: How to boot by hand	B1 Lists the components of the time series	Theoretical
2	Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self learning	Explaining the branches of statistics Clarifying agricultural census activities Identify the origins - and development of agricultural statistics	A2Explains the branches of statistics	practical

Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self learning	Second: The method of averages of the two halves of the series	A2 finds the general trend equation using the semiseries average method	theoretical	
Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self learning	Clarifying the role of the Food and Agriculture Organization Enumeration of types of agricultural statistics	C2 Explains the role of the Food and Agriculture Organization	practical	3
Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self learning	Third: The moving average method	A2 finds moving averages	theoretical	
Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self learning	The concept of agricultural censuses and their importance Comparing basic and current agricultural statistics Mention the benefits of censuses agricultural	A1 Knows agricultural censuses	practical	4

Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self learning	Fourth: The least squares method	C1 Calculates the general trend equation using the least squares method	theoretical	5
Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self learning	Explaining agricultural census methods Explaining the types of samples	A2 Explains the methods of the agricultural census	practical	
Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self learning	Seasonal changes -2 First: The method of ratio to the moving average	C2 shows seasonal changes	theoretical	6
Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self learning	Conditions that must be met in the agricultural census Understanding the obstacles and problems facing Agricultural census Explaining the sources of errors in the agricultural census	B1 Enumerates the conditions that must be met in the agricultural census	practical	

Semester exam 1, final exam	lecture brainstorming, dialogue and discussion, self learning	Second: Simple averages method	A3 is solved using the simple averages method	theoretical	7
Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self learning	Steps to implement - the agricultural census	B1 enumerates the steps for implementing the agricultural census	practical	
Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self learning	Third: The method of ratio to the general average	A4 is demonstrated using the general mean ratio method	theoretical	8
Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self learning	Size and composition of the total land stock Earth's balance - Sowed land and planted land	C2 Explains Earth statistics	practical	

Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self learning	Fourth: The method of ratio to the general trend <img alt="Handwritten notes: Fourth: The method of ratio to the general trend. Includes a diagram showing a circle with numbers 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 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		<b>balances for agricultural products</b> <b>Monetary - estimation of agricultural production</b>		
Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self learning	Irregular changes -4 	B5 Evaluates irregular changes	theoretical
Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self learning	Examples of changes in agricultural production	C4 Analyzes the change in agricultural production	practical
Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self learning	Standard numbers Configure the record number Simple index - number	A2 explains index numbers	theoretical
Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self learning	The Examples of impact of factors on the growth of agricultural	C4 analyzes the impact of factors on agricultural	practical

			production	production	
				growth	
Semester exam 1, final exam	Interacti ve lecture, brainsto rning, dialogu e and discussi on, self learning	D1 estimates  Unweighted - aggregate price indices  The simple -1 aggregate index number  cumulative The -2 index of lineages (National and local)	unweighted aggregate price indices  theoret ical	3 1	
Semester exam 1, final exam	Interacti ve lecture, brainsto rning, dialogu e and discussi on, self learning	C2 shows labor statistics  Number of Workers  Labor installation		practic al	
Semester exam 1, final exam	Interacti ve lecture, brainsto rning, dialogu e and discussi on, self learning	D1 estimates  Weighted - aggregate price indices  Laspeyrc method -1 Bash method -2 Igori method	weighted aggregate price indices  theoret ical	4 1	
Semester exam 1, final exam	Interacti ve lecture, brainsto rning,	-Labor movement - working time	A2 explains the movement of labor	practic al	

	dialogue and discussion, self learning			
Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self learning	Standard numbers - ) for quantities Laspeyre, Pasch, (Fisher Relative index - numbers for prices and quantities Linking standard - numbers	B4 Examines standard numbers of quantities	theoretical
Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self learning	Methods of calculating labor productivity Indicators for calculating labor productivity Change in labor productivity	C1 Shows labor productivity	practical

#### Course evaluation 1)

% Relative weight	Class	Calendar date (week)	Calendar methods
52.	52.	the third week	(1) Short test (Quiz)
20	20	the sixth week	Theoretical semester test
2.5	2.5	The ninth week	Short test (Quiz2))
40	40	Final semester exam	Final theoretical test
2.5	2.5	The first week	Practical short (1) Quiz test
5.2	2.5	fourth week	Short practical

10	10	the sixth week	Practical semester test
20	20	Final semester exams	Final practical test
100%	100%		the total

Learning and teaching resources

Khalaf Abdul .Dr .Agricultural Statistics  
Hussein

(Required textbooks (methodology, if any

Ali Darb Kassar .Dr . Agricultural Statistics  
Principles of probability and statistics Dr. Ezz  
Omar Qasim  
-Al Al -Applied Statistics Dr. Muhammad Ab  
Nuaimi, Dr. Hassan Yassin Tohme  
nothing

(Main references (sources

Recommended supporting books and  
(...references (scientific journals, reports

Electronic references, Internet sites

Theoretical subject teacher

Prof. Dr. Alaa Muhammad Abdullah

Practical subject teacher

M.M. Farah Muhsen Ali

Head of the Agricultural Economics Department

Chairman of the Scientific Committee

Prof. D.qais Nadir Kazal

## Course Description Form

1. Course name:

**accounting principles**

2. Code Course code :

**MAET386**

3. Semester / Year:

**2025-third stage/2024/ semester**

4. Date of preparation of this description:

**2024/9/1**

5. Available forms of attendance:

**person + online-In**

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

**number of units .45 Theoretical hours: 30 hours / Practical hours3.5 units**

7. (of the course supervisor) if more than one name is mentioned Name:

: Email Name: Asst . Dr. Okba Mohammed Nouri Alagha

okba.mohammed.alagha@uomosul.edu.iq

: Email A Asst . Dr. Sura Sael Abdul :Names ur384 @uomosul.edu.iq

### **8. objectives Course**

Enabling the student to -life Enabling the student to know the importance of accounting in daily  
(know how accounting has developed over time (accounting in ancient civilizations

.Enabling the student to understand and comprehend the concepts of accounting -

.Enabling the student to know accounting records and document -

.Enabling the student to know what the accounting cycle is -

.Enabling the student to know how to record commercial entries in the journal -

Enabling the student to know how to transfer entries from the journal to the general ledger. The -  
.know how to prepare the trial balance student can

The student can learn how to prepare annual statements and final reports at the end of the fiscal year

.The student can deal with financial operations in accounting entries -year.

### **9. Teaching and learning strategies**

Interactive lecture

brainstorming

Dialogue and discussion , field training, practical exercises

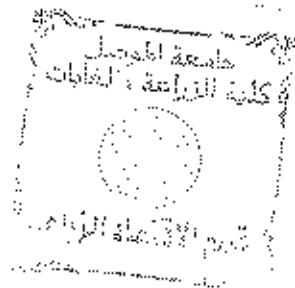
learning -Self

## 10- Course structure

Evaluation method	Learning method	Name of unit or topic	Required learning outcomes	Weeks	week
short exams Duty assignment discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	The nature of accounting	A1: The student learns about accounting and its importance in our lives	2 theoretical	First week
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	Understanding accounting concepts	A2: Learns the importance of accounting in daily life	3 practical	
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	Accounting system for saving decision Data needed for making	A2 The student learns the importance of accounting in revenues and determining losses for economic activities	2 theoretical	Second week
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report		A3 Learns how to use accounting to rationalize administrative decisions	3 practical	
short exams Duty assignment discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	Historical development in accounting recording transactions	A2 The student learns about the importance of the role of ancient accounting in civilizations	2 theoretical	third week
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	Accounting in ancient civilizations	A3 The student learns about the history of accounting in the Aqsa, -civilizations of Wadi Al accounting in the civilizations	3 practical	



			of Mesopotamia, ancient Myra Greek civilization, and in Islam accounting		
short exams Duty assignment discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	restriction single	A2 The student learns how entry registration -single processes appear	2 theoreti cal	Week 4
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	Single entry and double entry	C2Solve practical examples	3 practica l	
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	double entry	C4: when a The student learns single entry occurs and how to record a single entry in the accounting records	2 theoreti cal	Week 5
short exams Duty assignment discussions	Auditory methods Blackboard writing style Direct dialogue style report Assignment and	Single entry and double entry	C2Solve practical examples	3 practica l	
short exams Duty assignment discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment of tasks	How to use the budget as a basis for applying double entry	C4: how to The student learns record double entry in accounting records	2 theoreti cal	Week 6
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment of tasks	How to use the budget as a basis for applying double entry	C2Solve practical examples	3 practica l	
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style	How to use the budget as a basis for applying double entry	C4: how to The student learns record double entry in accounting records	2 theoreti cal	Week 7



	And report Assignment of tasks				
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style And report Assignment of tasks	How to use the budget as a basis for applying double entry	C2 Solve practical examples	3 practical	
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	accounting cycle	A3 The student learns about the accounting cycle	2 theoretical	
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	accounting cycle	C1 Solve practical examples	3 practical	Week 8
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	Types of accounting records	A4 Identify the types of accounting records	2 theoretical	
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	Types of accounting records	C2 Review different types of accounting records	3 practical	Week 9
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment of tasks	journal	A2 Learn how to record business entries in the journal	2 theoretical	
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment of tasks	journal	C2 Solution of practical examples on recording entries in the journal	3 practical	Week 10
short exams Duty	Auditory methods Blackboard writing style	Professor's record	A2 The student learns how to transfer entries from the	2 theoretical	Week 11



discussions	Direct dialogue style Assignment and report		Journal to the general ledger	cal	
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	Professor's record	C2 Solution of practical examples on recording entries in the general ledger	3 practices 1	
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	Account balancing	A2 The student learns how to balance accounts	2 theoretical	Twelfth week
short exams Duty assignment discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	Account balancing	C2 Practical Examples	3 practices 1	
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	Preparing the trial balance	A2 Learn how to prepare a trial balance	2 theoretical	Thirteenth week
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	Preparing the trial balance	C2 Solutions to practical examples	3 practices 1	
short exams Duty assignment discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	Preparing the final statements	A1 Learns how to prepare and write closing statements	2 theoretical	Fourteenth week



short exams Duty assignment discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	Preparing final statements	C1 Solution of practical examples	3 practical 1	
short exams Duty discussions	Auditory methods blackboard Writing style on Direct dialogue style Assignment and report	Financing operations	A1 The student learns how to record financial transactions	2 theoretical	
short exams Duty discussions	Auditory methods blackboard Writing style on Direct dialogue style Assignment and report	Recording financial transactions	C1 Practical Examples	3 practical 1	Week 15

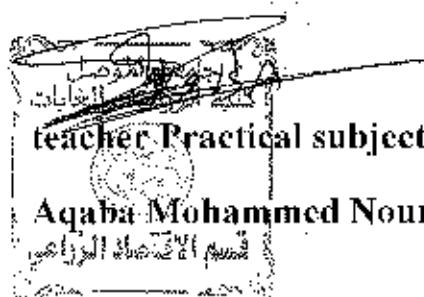


### **11 Course Evaluation -**

Relative weight %	degree	Calendar week -appointment	methods Evaluation	T
5	5	-1 My theory week 15	Final theoretical report	1
10	5 5	Week 3	Test 1Quiz	2
15	10 5	Week 9	Midterm exam Theoretical and practical	3
10	5 5	Week 12	Test 2Quiz	4
20	20	Practical exam week	exam Final practical	5
40	40	Theoretical exam week	Final theoretical exam	
100	100		the total	

### **12 Learning and teaching resources -**

Introduction to Operations Research / Adnan Shamkhi / Dhuya Salman	Required textbooks -1
Operations Research and Decision Dash , -Making, Dr. Afif Ali Hassan Al 2012	(Main references (sources -2
Modern books in quantitative methods/decision making	A. Recommended books and references ( scientific journals, reports
Building Mathematical Models // Local and international journals specialized in the field of operations research and quantitative management	...Electronic references, websites -B
Iraqi Virtual Library/External Internet .Research	



**teacher Practical subject teacher Theoretical subject**

**Aqaba Mohammed Nouri Asst. Dr. Sari Saeed Abdul .Asst. Dr.**

**Chairman of the Scientific Committee Head of the Department of  
Agricultural Economics**

**Mohammed Prof. Dr. Alaa Mohammed Abdullah Prof. Dr. Alaa  
Abdullah**



## Course description form

1.	Course name/Agricultural Accounting Agricultural accounting	
2. Course Code	AGAC391	
3. Year/Semester	2025-2024/third stage/ semester	
4. Date this description was prepared	2025/2/1	
5. Available forms of attendance	presence+online	
6. Total number of units / total Number of study hours	number of units 45 :Practical hours /hours 30 /Theoretical hours: 3.5 units	
7. (If more than one name is mentioned) Name of the course administrator	<b>Emil: Amina abdulilah hamdoonamina80@uomosul.edu.iq</b> <b>Osama.IaithMuhammadFaiOsama.Iaith@uomosul.edu.iq</b> <b>A hmad.alajrawy</b> <b>A hmad.alajrawy@uomosul.edu.iq</b>	

### 8. objectives Course

practical	theoretical
<p>to explain the Introducing the student to how - main purpose of agricultural accounting</p> <p>the nature of Enabling the student to know agricultural work</p> <p>methods The student will be shown the types and processing agricultural crop accounts of the crop calculation table Shows the student Methods of tabulating data and performing calculations</p> <p>and Shows the student how to use the crop stores calculation table sales</p> <p>the number of stages that It explains to the student e nurseries and agricultural units that includ and how to conduct final orchards go through calculations</p> <p>the accounting spreadsheet for It shows the student and all grain crops as well nurseries and orchards</p> <p>to Explains to the student and enables him organize an accounting table for calculating fattening livestock</p> <p>an Enabling the student to make accounting spreadsheet to account for and all types of livestock dairy cattle each according to their use</p>	<p>The student learns about the concept of agricultural accounting</p> <p>Shows the student the difference between financial accounting and agricultural accounting</p> <p>It explains to the student the curriculum and the nature of agricultural work + assignments and the implications of accounting the concept of records and The student solves documents</p> <p>Introducing the student to daily records daily records Shows the student the types of and the professor what an inventory record is Explain to the student</p> <p>Explains to the student the concept of the importance of agricultural accounting and the debtor relationship-creditor</p> <p>It shows the student how to use records and monthly and annual (how to make a daily inventory)</p> <p>Shows the student the types of records according to crops</p> <p>Explains to the student grain crop records</p> <p>Shows the student the records of fattening and livestock</p> <p>Explains to the student the breeding and fattening records</p>

## 9-Teaching and learning strategies

- The strategy
- 1. The interactive lecture, brainstorming, dialogue and discussion, explains the importance of agricultural accounting
  - 2. The interactive lecture is brainstorming, dialogue and discussion on the types of agricultural and financial accounting and comparison between them
  - 3. Interactive lecture, brainstorming, clarification of agricultural records systems for crops
  - 4. Interactive lecture, brainstorming, and finding the number of stages that agricultural units that include nurseries and orchards go through
  - 5. Interactive lecture, brainstorming, dialogue and participation in agricultural accounting strategy
  - 6. Interactive lecture, brainstorming, dialogue and participation in An accounting table for the growth and exploitation stage
  - 7. Interactive lecture, brainstorming, dialogue and discussion, assigning tasks and reporting Dairy and all types of livestock
  - 8. Interactive lecture, brainstorming, dialogue and discussion, assigning tasks and reporting An accounting table for the growth and exploitation stages
  - 9. Interactive lecture, brainstorming, dialogue and discussion, assigning tasks and reporting Crop sales calculation table
  - 10. The interactive lecture and brainstorming explained the stage of decline and decay
  - 11. Interactive lecture, brainstorming, dialogue and discussion on agricultural record systems for crops
  - 12. Interactive lecture, brainstorming, dialogue and discussion, assigning tasks and reporting Livestock accounting table

	Interactive lecture, brainstorming, dialogue and discussion Explain the expense and revenue account for breeding livestock
	He is assigned a duty to explain the concept of accounting for breeding livestock
	He is assigned the task of solving an exercise

Course Structure					
Evaluation method	Learning method	Name of the unit or topic	Reinforced learning activities	hours	the week
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Identify the concept of agricultural accounting and recognize the difference between it and agricultural accounting	The student gets A1 the acquainted with concept of agricultural accounting shows the student B1 the difference between financial and accounting accounting	2 Theoretical	1
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Identify the types of agricultural records	The student learns C1 to organize how agricultural records	Practical	
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Identify the daily log platform	Explains to the B2 student the types of records	2 Theoretical	
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Identify the types professor records	How to analyze D1 the crop calculation table	Practical	2
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Inventory record	Definition of an A2 individual's demand for a commodity and of negative the law slope demand	2 Theoretical	
Short exams	Auditory methods	Statement of	B3 How to inventory	Practical	

Assignment of duty discussions	Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	records farmers	farm records the crop DisplayC3 warehouse calculation table	cal
amsShort ex Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Identify the stages that nursery accounts go through	shows the B4 number of The student stages that agricultural units that include nurseries and orchards go through	2 Theoretical
exams Short Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Learn about crop records systems	The student C4 Agricultural learns records systems for crops	Practical
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard dialogue Direct style Assigning tasks and reporting	Difference between agricultural accounting and financial accounting	The student B5 The main appreciates purpose of agricultural accounting	2 Theoretical
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard dialogue Direct style Assigning tasks and reporting	Learns about the nature of farm workers accounting	The student D2 the nature of analyzes agricultural work	Practical
Short exams Assignment of duty discussions	Auditory methods Style of writing on blackboard the Direct dialogue style Assigning tasks	Tables for growth and exploitation	Explains to the B6 Explain the student concept of growth and exploitation	2 Theoretical
Short exams Assignment of duty discussions	Auditory methods Style of writing on blackboard the Direct dialogue style Assigning tasks	Accounting for the production and fruiting phase	How to calculateCS the production and fruiting stage	Practical
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Addressing the decline of orchards	Explains to the B7 the stage of student decline and decay	2 Theoretical
Short exams	Auditory methods	Examples of process	How toC6	Practical

Assignment of duty discussions	Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	calculating nurseries and orchards	incidental revenue accounts	cal
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Accounting processing of the fattening account	shows the B8 fattening student livestock	2 Theoretical
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Examples of livestock accounting	to count HowC7 livestock	Practical
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Accounting for dairy cattle	Explains to the B9 dairy cattle student	2 Theoretical
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Examples of calculating the dairy of amount products	Shows the student B10 the effect of dairy cattle	Practical
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks	Breeding livestock account	The student learns A3 about the concept of breeding livestock	2 Theoretical
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks	the breeding for livestock account	A4 Accounting recognizes for breeding livestock process Learns to C8 the accounting for breeding livestock	Practical
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Calculating expenses and revenues for breeding livestock	The student A5 recognizes a Calculating concept expenses and revenues for breeding livestock	2 Theoretical
Short exams	Auditory methods	and expenses	E2	Practical

Assignment of duty discussions	Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	for revenues breeding livestock	The student distinguishes the accounting treatment of expenses and revenue of breeding livestock and their expenses	cal	
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Processing the output account and its sales for livestock	The student learns A5 about raising livestock How to calculate C. 9 Livestock breeding How to calculate B11 breeding livestock	2 Theoretical	12
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	of Methods calculating the output and sales breeding of livestock	The student D4 distinguishes and compares methods of calculating milk and livestock	Practical	
Short exams Assignment of duty discussions	Auditory methods writing on Style of the blackboard Direct dialogue style Assigning tasks and reporting	Production theory production with one variable (input average Total and marginal output Stages of production	Explains to the B12 student the total and marginal average of the law product diminishing returns and the stages of production Figure of the C10 curve of average product and marginal product	2 Theoretical	13
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Calculation methods for livestock and dairy	The student D5 compares and distinguishes between educational methods distinguishes E3 between dairy and breeding cattle	Practical	
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Orchard accounts	Explains to the B13 student the orchard calculations	2 Theoretical	14
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Examples of orchard accounts	The student D6 analyzes orchard accounting methods	Practical	
Short exams Assignment of	Auditory methods Writing style	Feedstock accounts	specifies the B14 student's fattening	2 Theoretical	15

Course evaluation		Class	-Calendar appointment a week	Calend ar method s	T
Relativ e weight %	s	s	15-1 My theory week	Final	

duty discussions	on the blackboardDirect dialogue style Assigning tasks and reporting		accounts	fical
Short exams Assignment of duty discussions	Auditory methodsWriting style on the blackboardDirect dialogue style Assigning tasks and reporting	Examples of fattening accounts	The student B15 learns how to calculate fattening	Practi cal



				theoretical report +	
10		5 5	Week 3	Quiz 1 Short test	1 2
15		10 5	Week 9	Midterm test Theoretical and practical	3
10		5 5	Week 12	Short 2test Quiz	4
20		20	Practical exam week	Final practical test	5
40		40	A week of theoretical exam	Final theoretical test	
100		100			the total

#### Learning and teaching resources 3.2

Ms .Asst Amina abduljilah hamdoon :Theoretical subject teacher

M.M Osama Laith Muhammad :Practical subject teacher

M.M A bniad.alajrawy : Practical subject teacher

Dr .Prof Qais Nazem Ghazal .:Head of the Scientific Committee

:Head of the Department of Agricultural Economics

Dr .Prof .Asst Zwaid Fathi Abdell

Chairman of the Scientific Committee  
and Head of the Department of Agricultural Economics



## **description template Environmental economics course**

1- Course Name
economics Environmental
2- Code Course Code
ENEC395
3- Year Semester
2025-2024 /third stage / 2025semester Spring
4- Date this description was prepared
2025/2/1
5- attendance Available forms of
My presence + online
6- (total) number of units / (total) Number of study hours
units 3 / Theoretical hour 45
6.1 if More than one name mentioned (Name of the course administrator)

M.A :Name :Amina - Abdul Ilah Hamdoun-  
aminas0@uum.edu.qa

### **objectives Course**

theoretical

- to environmental Enabling the student to understand and comprehend what is related economics
- sandnew resource Enable the student to know the divisions of natural resources renewable resources with examples
- ways to get rid of their types environmental problems Enabling the student to know and turn the crisis into an opportunity develop solutions and alternatives them
- the environmental risks of pollution know the types of po Enabling the student to and the concept of the characteristics of the environment and its elements pollution environmental efficiency and its elements
- environmental development and evaluation of environmental performance Student waste recycling as an transforming adversity into a gift tal planningenvironmental economic opportunity
- liquid and gaseous waste learn about methods of recycling solid The student can
- The student can understand the importance of substitution and expansion in the economic resources and the difference between them new and renewable
- The student can learn about the standards of environmental economic evaluation and comprehensive environmental quality environmental investment planned management

### **Learning and learning strategies**

Teach the content of environmental brainstorming Interactive lecture

The

.types, the most important ways to address it, and the environmental tax  
and examples of Interactive lecture, brainstorming, presentations of models  
.developing country experiences in addressing environmental problems  
sustainable environmental development, the active lecture, brainstorming  
.ecosystem and its components, and divisions of natural resources  
of graphs to model material Interactive lecture, brainstorming, and presentation  
.flows in simple economics  
ve lecture, brainstorming, dialogue and discussionInteractive  
Interactive lecture, brainstorming, dialogue and discussion, assigning tasks and  
reporting  
Interactive lecture, brainstorming, dialogue and discussion, assigning tasks and  
reporting  
ainstorming, dialogue and discussion, assigning tasks and Interactive lecture, br  
reporting  
environmental Interactive lecture, brainstorming, dialogue and discussion  
economic assessment  
comparing new resources and an assignment in to prepare He is assigned  
nd then discuss it with the studentsa +renewable resources  
Interactive lecture, brainstorming, dialogue and discussion, assigning tasks and  
reporting  
about environmental Interactive lecture, brainstorming, dialogue and discussion  
.tions and dimensionsbusiness intelligence, its challenges, justifica  
He is assigned to prepare a report on the scientific visit and prepare it for  
discussion with the students  
on environmental performance a duty to prepare He is assigned  
and Environmental costs, waste recycling as an economic opportunity  
prepare it for discussion with students

1. *Environmental costs*  
2. *Waste recycling*  
3. *Business intelligence*  
4. *Challenges*  
5. *Justifications*  
6. *Dimensions*

**10 Course structure**

Evaluation method	Learning method theory (ideal)	Name of the unit or topic	Required learning outcomes	Hours the week
Short exams	Auditory	Elementary in economics Fahim M environment the	The A1 : learns student about environmental economics and of the nature the relationship ...between Economy and environment	3 Theoretical first week
Assignment of duty discussions	Style of writing on the blackboard and style	Direct dialogue		
Short exams	Auditory	Ecosystem and its components		
Assignment of duty discussions	Style of writing on the blackboard and style	Direct dialogue	The A2 learns student the about types, elements, and characteristics of the environment	3 second week
Short exams	Auditory	Environmental problems and ways to address them Environmental Pollution	Explains B1 to the student the concept of the environmental problem ( air pollution , energy, climate change, (population	3 Theoretical third week
Assignment of duty discussions	Style of writing on the blackboard and style	Direct dialogue		
Short exams	Auditory	Divisions of natural resources	Explains B2 the types of natural resources in the environment	3 Theoretical fourth week
Assignment of duty discussions	Style of writing on the blackboard and style			

		Direct dialogu e					
Short exams Assignment of duty discussions	Auditor y methods	of The economic concept cost environmental		Explains B3 to the student the concept of environmental And its costs types	3	Theoretical	The fifth week
Short exams Assignment of duty discussions	Auditor y methods	environmental economic assessment		the Shows B4 student environmental efficiency, environmental performance, and environmental onomic ee .evaluation	3	Theoretical	the sixth week
Short exams Assignment of duty discussions	Auditab y methods	Sustainable environmental development		has B5 requester Ability to plan environmental invest and 'ly consume environmental ly	3	Theoretical	Seven th week
Short exams Assignment of duty discussions	Auditor y methods	The concept of environmental tax and its applications		Explains B6 the mental environ tax to reduce environmental pollution	3	Theoretical	The eighth week



جامعة الملك عبد الله

جامعة الملك عبد الله

Short exams	Auditor	Comprehensive environmental quality management	It is clear B7 For students: Environmental performance and environmental quality management		
Assignment of duty discussions	Style of writing on the blackboard and style Direct dialogues		Theoretical 3 Week nine		
Short exams	Auditor	Natural resource economics	He paints C1 Student drawing diagram flows Material for a simple economic model	Theoretical 3	The tenth week
Assignment of duty discussions	Style of writing on the blackboard and style Direct dialogues				
Short exams	Auditor	production and consumption environmental investment	It shows B9 how students to substitute and distribute resources to obtain a certain level of production	Theoretical 3	Week eleven
Assignment of duty discussions	Style of writing on the blackboard and style Direct dialogues				
Short exams	Auditor	Waste, its types and recycling methods			
Assignment of duty discussions	Style of writing on the blackboard and style Direct dialogues		Students A3 learn about types of waste and recycling	Theoretical 3	The twelfth week
Short exams	Auditor	Waste recycling as an economic opportunity	To Explain B10 the students to obstacles	Theoretical 3	The thirteenth week
Assignment of duty discussions	Style of writing on the blackboard and style Direct dialogues				

ent of duty discussions	Style of writing on the blackboard and style Direct dialogue	waste recycling		week
Short exams Assignment of duty Discussions Reports	Auditory methods Style of writing on the blackboard and style Direct dialogue	-New resources and non renewable resources  CompareC2: new resources and renewable resources	3 Theoretical	The fourteenth week
Short exams Assignment of duty And discuss it	Auditory methods Style of writing on the blackboard and style Direct dialogue	The concept of environmental business intelligence - justifications -Its dimensions challenges  ExplainsB11: environmental business intelligence and its challenges	3 Theoretical	The fifteenth week



Relative weight %	Class	Calendar a week-appointment	Course evaluation- II	
			Calend ar metho ds	Theoret ical final report
5	5	15-1 My theory week		
10	10	Week 3	Quiz Short test 1	
15	15	Week 9	Midterm test theoretical	
10	10	Week 12	Short test 2	
60	60	A week of theoretical exam	Quiz Final theoretical test	
100	100			the total

#### Learning and teaching resources 12

Dr. Stephen Smith 2020 -A Very Short Introduction) ) Environmental Economics

Dr. Mustafa Youssef Kafi 2013 - Environmental Economics

Quraishi 2017-Dr. Ali Hatem Al - Introduction to Environmental Economics

Theoretical subject teacher : Amna Abdellah hamdoon

Chairman of the Scientific Committee

Department Agricultural Economics



## Course description form

		Course Name <b>1</b>
		Research methods
		Course Code <b>2</b>
		REME388
		Semester Year: Annual <b>3</b>
		<b>2025-2024 / (The first (autumn</b>
		Date this description was prepared <b>4</b>
		2024/9/1
		Available forms of attendance <b>5</b>
		Attendance
		(total) number of units (total) Number of study hours <b>6</b>
		<b>( 2 ) Number of units/ ( 60 ) Number of hours</b>
		(Name of the course administrator (If more than one name is mentioned) <b>7</b>
		ramiaalala83@uomosul.edu.iq :Email Alaf-Dr. Ramia Amer Khalil Al :Teacher
		Course objectives <b>8</b>
		, to how to write scientific research Introducing the student -1 Preparing agricultural cadres capable of familiarizing themselves with the -2 scientific of preparing research and knowing the methods of writing means .research development -The skill of conducting field application for the purpose of self - 3 and personal development and the skill of using educational methods which the department + the economy Qualifying them to advance the reality of -4 preparing scientific research is interested in addressing in
		Teaching and learning strategies <b>9</b>
		Transferable general and qualifying skills (other skills related to -1 .employability and personal development
		Training the student on how to use information sources to -2 . maintain and develop his basic information
		Developing the student's method of transferring information to the -3 . work environment
		ining the student to conduct scientific research to solve problems at -4 . work and develop methods
		Course structure <b>10</b>

Evaluation method	Teaching method	Name of the unit/topic	Required learning outcomes	hours	the week
Duties	Learning method	Name of the unit or topic	Required learning outcomes	hours	the week
Daily exams	theoretical Auditory methods Style of writing on the blackboard Direct dialogue style	Science and scientific research	The student should B1 and A1 be able to know and understand scientific research	1	theoretical
Daily exams	practical Assigning tasks and reporting	Scientific research and its types	One should be familiar A16 with aspects of scientific research	Pract3	ical
Duties	theoretical Auditory methods Style of writing on the blackboard Direct dialogue style	The basic elements of the research plan	The student should be able A2 to know and understand the methods and elements of scientific research	1	theoretical
Duties	practical Assigning tasks and reporting	Research applications	Conducting applications A17 on research to learn the basic elements of scientific research	Pract3	ical
Daily exams	theoretical Auditory methods Style of writing on the blackboard Direct dialogue style	Components of scientific research	The student B2 and A3 should be able to know the and understand components of scientific research	1	theoretical

Duties	practical Assigning tasks and reporting	Problem, goal, hypothesis and method	Writing a A18 plan that includes the components of scientific research	3 practical
Daily exams	theoretical Auditory methods Style of writing on the blackboard Direct dialogue style	Steps for reviewing theoretical literature and previous studies	The student B3 and A4 should be able to know the steps of theoretical previous literature and studies	Theoretical fourth week
Duties	practical Assigning tasks and reporting	Applying the steps of reviewing theoretical literature	Write a previous A19 study on an agricultural topic economic	3 practical
	theoretical Auditory methods Style of writing on the blackboard Direct dialogue style	Samples	The student should A5 be able to know and understand how to take study samples	1 theoretical The fifth week
Semester exam	practical Assigning tasks and reporting	Population and sample in scientific research	Identifying A20, B4,C4 types of samples	Practical
Daily exams	theoretical Auditory methods Style of writing on the blackboard Direct dialogue style	Hypotheses	The student A6, B4, C1 should be able to know test hypotheses how to	1 theoretical the sixth week



Duties	practical Assigning tasks	Methods of formulating and testing hypotheses	Learn how to A21,B11 write a hypothesis for research scientific	Pract3 ical
Daily exams	theoretical Auditory methods Style of writing on the blackboard Direct dialogue style	Questionnaire	The student A7,B5 should be able to know how to design a questionnaire	1 theoret ical
Duties	practical Assigning tasks and reporting	Questionnaire design controls	Designing A22, B12 questions for a scientific research questionnaire	Pract3 ical
Daily exams	theoretical Auditory methods Style of writing on the blackboard Direct dialogue style	The basic elements of the research plan	The student should A8 be able to know and the main understand elements of preparing economic scientific research	1 theoret ical
Duties	practical Assigning tasks and reporting	Steps for writing the basic elements of a research plan	The necessity A23, B13 of writing the basic research implications of agricultural scientific research	Pract3 ical
Daily exams	theoretical Auditory methods Style of writing on the blackboard Direct dialogue style practical	Scientific research method  Types of scientific method and its formulation	The student should A9 be able to know and scientific understand research methods	1 theoret ical

	Assigning tasks and reporting				
Daily exams	theoretical Auditory methods Style of writing on the blackboard Direct dialogue style	Types of scientific research	The student A10, B6 should be able to know the and understand types of scientific research	I theoretical	The tenth week
Duties	practical Assigning tasks	Applied and experimental research	Identify the A24, B14 types of scientific research	Practical	
Daily exams	theoretical Auditory methods Style of writing on the blackboard Direct dialogue style	Developing scientific research tools	The A11, B7, C2 student should be able to know, understand develop scientific and research tools	I theoretical	Week eleven
Duties	practical Assigning tasks and reporting	Development of scientific research tools	Modern A25, B15 methods in scientific research	Practical	
Daily exams	theoretical Auditory methods Style of writing on the blackboard Direct dialogue style	Master's theses plans	The A12, B8, C3 student should be able to know and understand master's thesis plans	I theoretical	The twelfth week

Duties	practical Assigning tasks and reporting	research plan for A a master's thesis should be written in order to distinguish between research and thesis	A research A26, B16, C5 plan for a master's thesis should be written in order to distinguish between the research and the thesis	Pract3 ical
Daily exams	theoretical Auditory methods Style of writing on the blackboard Direct dialogue style	to Scientific visit libraries	The student A13,C4 visit libraries should and obtain research information	1 theoret ical  The thirteenth week
Duties	practical Assigning tasks and reporting		Learn how to search C6 and index	Pract3 ical
Semester exam	theoretical Auditory methods Style of writing on the blackboard Direct dialogue style	A visit to the college library, administration and economics library, central library, electronic library	The student should A14 be able to know and how to write understand sources	1 theoret ical  The fourteenth week
Duties	practical Assigning tasks and reporting	Documentation of sources	Identify the A27, B17 systems of writing sources	Pract3 ical
Daily exam	theoretical Auditory methods Style of writing on the blackboard	Agricultural economic research	You should A15, B9 know how to write agricultural economic research	1 theoret ical  fifteenth The week



	<b>Direct dialogue style</b>			
Duties	Common questions in the discussion and ways to answer them	Common questions in the discussion and ways to answer them	Discuss A28,B18 agricultural economic research	Practical
<b>Course evaluation</b>				11
Attendance 5% %5 (Quiz ) Short tests First semester exam 15% semester exam 15% Second Pursuit score 40% Final exam 60% Final grade 100%				
<b>Learning and teaching resources</b>				12
Scientific research methods Dr. Muhammad Abdel Aal Al Nuaimi		(Required textbooks (methodology, if any		
Wafa-book Dr. Issam Abu Al Agricultural economics Scientific research between theory and The book of Ghandour-application, Dr. Muhammad Jalal Al		(Main references (sources Recommended supporting books and ....references (scientific journals, reports		
<a href="http://www.noor-book.com">www.noor-book.com</a>		Electronic references, Internet sites		

Head of the Agricultural Economics Department

Mr. Dr. Alaa

Subject teacher

Dr. Ramya Amer Khalil  
Muhammad Abdullah

Chairman of the Scientific Committee

Abdullah Mr. Dr. Afaa Muhammad



# Course Description Farm Business Management

1. Course Name:

Farm Management

2. Course code:

FAWM 393

3. Semester/Year: Annual

Second Semester/Spring/2024–2025

4. Date this description was prepared:

2025 /2 / 1

5. Available attendance forms:

Presence + Electronic

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

2 hours theoretical / 3 hours practical (5 hours) / 3.5 units

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

Dr. Zwaid Fathy Abd

Mhasin Mahmoud Sultan

[mhasin.sultan@uomosul.edu.iq](mailto:mhasin.sultan@uomosul.edu.iq)

Osama Laith Mohammed Faeq

## 1. Course objectives

- The student learns about economic concepts that can be applied to decision-making using farm conditions.
- Developing the student's skills in planning, budgeting, and financial analysis of farm businesses, and investment analysis.
- The student is able to achieve the optimal use of production elements on the farm and achieve economic efficiency.
- Enabling the student to submit farm reports and records
- Enabling the student to calculate the depreciation of agricultural machinery, machines, and buildings
- Enabling the student to link the economic foundations and standards that govern planning, executive, and control decisions in the fields of production and marketing.
- Enabling the student to determine the optimal size of the farm
- Enabling the student to understand, comprehend, and distinguish between production and agricultural costs and agricultural assets
- Enabling the student to use the economic rules that govern the selection of agricultural resource combinations to select production combinations of different agricultural commodities
- Enabling the student to develop different alternatives to make a production or investment decision.
- Enabling the student to provide advice in the field of farm management, especially in determining the financial and economic position of the facility and identifying the areas that give the highest returns.
- Enabling the student to make investment decisions for agricultural projects under conditions of risk



and uncertainty

- Enabling the student to measure economic efficiency using some statistical programs
- Enabling the student to reach the optimal crop combination that maximizes net income or minimizes costs

## 2. Teaching and learning strategies

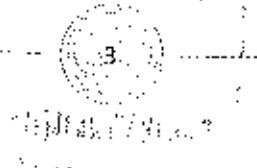
- Interactive lecture
- Brainstorming
- Dialogue and discussion
- Homework assignment

## 3. Course structure

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Hour	Week
Term Test	1. Interactive lecture, brainstorming, dialogue and discussion	Farm management concepts and functions	A1: The student learns about farm management and the comparison between farm management, general management and business management. B1: Show the student the difference between farm tool science and other agricultural sciences and explain the characteristics of a successful farm manager, explain the functions of farm management, and choose the factors that help in selecting a successful agricultural project.		2Theoretical
Short practical test homework	1. Interactive lecture, brainstorming, dialogue and discussion	farm production costs	A3: The student learns about farm production costs E2: The student distinguishes between farm production costs and farm assets B16: The student solves practical examples of types of farm production costs and displays the shapes of cost curves and their derivatives D5: The student analyzes the farmer's position regarding the profit and loss facing the producer on the farm	1 3 practical	
Midterm 1, Final	Interactive lecture, brainstorming, dialogue and discussion	Farm Decision Making Process	B2: Explain to the student the concept of the farm decision-making process, clarify the scientific steps in making farm decisions, classify the decisions made by the farm		2Theoretical
Practical 1	Interactive lecture, brainstorming, dialogue and discussion	Principle of determining the best level of production	B17: Explains to the student the basic conditions for determining the best level of production, applications and mathematical examples for determining the best level of production. D6: Conclusions for the student from the principle of determining the best level of production.	2 3 practical	
Midterm 1, Final	Interactive lecture, brainstorming, dialogue and discussion	Economic efficiency measures on the farm	B3: Give the student a description of economic efficiency and its components D8: Explain to the student the criteria for evaluating		2Theoretical 3



				different production projects with applied models	
Practical 1 Assignment 1	Interactive lecture, brainstorming, dialogue and discussion	Practical application of economic efficiency measures	Farm size	C1: Show the student the criteria used to measure economic efficiency on the farm with mathematical examples of its application B18: The student solves mathematical exercises and presents graphical representations of efficiency measures and project evaluation.	3 practical
Midterm 1 Final	Interactive lecture, brainstorming, dialogue and discussion	Farm size	Farm Records	B5: Explain to the student the concept of farm size and the optimum size for production, explain the factors determining farm size. C3: Enabling the student to determine the optimal production volume in the long term theoretically and graphically.	2Theoretical
Practical 2	Interactive lecture, brainstorming, dialogue and discussion	Farm size	Farm Records	C3: Enabling the student to determine the optimal production volume in the long term theoretically and graphically.	3 practical
Midterm 1, Final Exam	Interactive lecture, brainstorming, dialogue and discussion	Farm Records	Field Visit	B6: The student learns about the concept of farm records, their importance and objectives. D1: Explain to the student the justifications for keeping farm records, and the distinction between the types of farm records.	2Theoretical
Test	Interactive lecture, brainstorming, dialogue and discussion	Farm Records	Field Visit	B19: Enable the student to formulate and display models of farm records for all agricultural activities C4: The student determines the optimal size of information graphically.	3 practical
Midterm 1, Final Exam	Interactive lecture, brainstorming, dialogue and discussion	Field Visit	Field Visit	C2: Field visit to Nineveh Agriculture Directorate to review farm records	2Theoretical
Writing a Report	Interactive lecture, brainstorming, dialogue and discussion	Field Visit	Field Visit	C2: Preparing a report on a field visit to the Nineveh Agriculture Directorate to review farm records and identify the most important agricultural problems.	3 practical
Writing a Report	Interactive lecture, brainstorming, dialogue and discussion	Farm Management Methods	Farm Management Methods	D2: Enable the student to provide justifications for studying farm management methods B7: Explain to the student farm management methods	1 Theoretical
Midterm 2, Final Exam	Interactive lecture, brainstorming, dialogue and discussion	Principle of Equal Marginal Returns	Farm Planning	B20: Describe the principle of equal marginal returns B21: Solve for the student a mathematical application example to determine equal marginal returns	3 practical
Practical Quiz 1	Interactive lecture, brainstorming, dialogue and discussion	Farm Planning	Principle of Replacement and Substitution	B8: Explain to the student the concept, objectives, types and methods of farm planning.	1 Theoretical
Short Practical Test 1	Interactive lecture, brainstorming, dialogue and discussion	Principle of Replacement and Substitution	Extinction and Methods of Calculating It	B22: Explanation of the principle of substitution and replacement and solving mathematical application examples	3 practical
Semester Test 2, Final Test	Interactive lecture, brainstorming, dialogue and discussion	Extinction and Methods of Calculating It	Extinction and Methods of Calculating It	A2: Introduce the student to depreciation and the factors affecting depreciation calculations D3: Explain to the student the justifications and reasons for calculating depreciation for agricultural machinery, equipment and buildings B9: Explain to the student the methods of calculating depreciation	1Theoretical
Short	Interactive lecture,	Extinction	Extinction	B23: Student Solution: Mathematical application	3



Practical Test 1	brainstorming, dialogue and discussion	Methods of Calculating It	examples for methods of calculating depreciation.	practical
Semester Test 2	Interactive lecture, brainstorming, dialogue and discussion	Methods of Valuing Agricultural Lands and Real Estate	B10: Explains the concept of agricultural land management, explains and identifies the factors affecting the evaluation of land and real estate facilities. Explains the methods of evaluating land and real estate facilities.	1Theoretical
Short Practical Test 1	Interactive lecture, brainstorming, dialogue and discussion	Methods of Valuing Agricultural Lands and Real Estate	B24: Giving the student a mathematical application of land and real estate evaluation methods.	3 practical
Writing a Report	Interactive lecture, brainstorming, dialogue and discussion	Field Visit to Solve a Problem	E1: Providing a solution to the agricultural problems related to olive cultivation from a field visit to the Bashqa Agriculture Division	1Theoretical
Writing a Report	Interactive lecture, brainstorming, dialogue and discussion	Field Visit to Solve a Problem	E1: Providing a solution to olive cultivation problems after a field visit to the Bashqa Agriculture Division	3 practical
Final Test	Interactive lecture, brainstorming, dialogue and discussion	Managing Work on the Farm Efficiently	B11: Explain to the student the concept and methods of planning and managing farm work.	1Theoretical
Practical Short Test 1	Interactive lecture, brainstorming, dialogue and discussion	Managing Agricultural Crops	B25: Explain to the student the most important economic criteria used in crop management.	3 practical
Homework				
Final Test	Interactive lecture, brainstorming, dialogue and discussion	Efficient Capital Management	B12: Explain the efficiency criteria for the use of farm capital.	1Theoretical
Practical Short Test 1 and Homework	Interactive lecture, brainstorming, dialogue and discussion	Farm Animal Management	B26: Explains to the student the economic criteria used in farm animal management.	3 practical
Short Test Final Test	Interactive lecture, brainstorming, dialogue and discussion	Linear Programming Method for Data Analysis	B13: Explains to the student the concept and tools of linear programming, linear programming methods.	1Theoretical
Practical Short Test 3	Interactive lecture, brainstorming, dialogue and discussion	Linear Programming Method	B27: Solving examples of the graphical and tabular methods of linear programming	3 practical
Short Test Final Test	Interactive lecture, brainstorming, dialogue and discussion	Risk and Uncertainty Management	B14: Explain to the student the concept of risk and uncertainty, identify and explain the types of risk in the agricultural sector. D 4: The student infers the factors causing risk and uncertainty.	النظرية
Test Practical Short 1	Interactive lecture, brainstorming, dialogue and discussion	Linear Programming Method	B28: Explains to the student the theoretical and mathematical methods for reducing the amount of risk in agricultural production.	3 practical

جامعة العلوم الزراعية  
كلية الزراعة

#### 4-Course Evaluation

Relative weight %	Degree	Calendar date (week)	Evaluation methods	No.
2.5	2.5	Week 6	Report 1	1
2.5	2.5	Week 11	Report 2	2
1	1	Week 1	Quiz (1)	3
1	1	Week 2	Quiz (2)	4
2	2	Week 9, 10	Quiz (3)	5
10	10	Week 7	Semester Test (1)	6
10	10	Week 30	Semester Test (2)	7
40	40	Final Semester Exams	Final Theoretical Test	8
1	1	Week 15	Short Test (4) Quiz	9
1	1	Week 1	Short Test (1) Quiz	10
2	2	Week 4 & 8	Short Practical Test (2) Quiz	11
1	1	Week 9	Short Practical Test (3) Quiz	12
5	5	Week 14	Short Practical Test (4) Quiz	13
20	20	Weeks 1,3,12,13,15	Homework	14
%100	%100	Final Semester Exams	Final Practical Test	15
			Total	

#### 5-Learning and teaching resources

Al-Samarrai, Hashim Alwan. 1982. Farm Business Management. Ibn Al-Atheer House for Printing and Publishing. University of Mosul. Iraq.	Required textbooks (methodology if any)
Al-Klidor, Qusay Qasim and Abdullah Hamad Al-Dabbash. Theoretical and Applied Farm Business Management. 2018. Anwar Dijlah Press, Baghdad, Iraq	Main References (Sources)
Al-Qadi Abdul Fattah Saleh and Ahmed Shukri Al-Rimawi. Principles of Farm Management. 1996. Dar Hanin, Amman, Jordan	
Dr. Khaled Al-Ruwais. Lectures in Agricultural Nursery Management, Qasr 213. Department of Agricultural Economics. College of Food and Agricultural Sciences	
nothing	Recommended supporting books and references (scientific journals, reports, .etc)
nothing	Electronic references, websites

Logo  
Faculty of Agriculture  
University of Mosul  
5

Practical subject teacher  
Mahasin Mahmoud Sultan  
Osama Laith Mohammed Faeg

Theoretical Subject teacher  
Dr.Zwayed Fathy Abed

Head of Agricultural Economic Department  
Dr. Zwayed Fathy Abd

Head of Scientific Committee  
Prof. Dr. Qais Nazem Ghazal



## Course Description Form

1. Course name	Agricultural production economics															
2. Course code	ECAP389															
3. Semester/Year	First Semester/Third Stage/2024-2025															
4. Date this description was prepared	2024/9/1															
5. Available attendance forms	In-person + online															
6. (Number of study hours (total)) / Number of units (total)	Theoretical hours: 30 hours / practical hours: 45 hours, number of units: 3.5 units															
7. (Name of the course administrator (if more than one name is mentioned))	Name: Asst. Dr. Ahmed Hashim Ali Email: ahmadhashim1982@uonosul.edu.iq Name: Asst. Dr. Mona Abdul Qader Ahmed Email: munaa.alhamadani@uonosul.edu.iq															
<b>8. objectives Course</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">theoretical</td> <td style="width: 50%;">practical</td> </tr> <tr> <td>the student to understand Enabling - and comprehend what is related to the economics of agricultural production</td> <td>Enabling the student to identify the laws -ities, the optimal and derivatives of elastic volume of production , and the optimal profit</td> </tr> <tr> <td>Enabling the student to know the factors of production</td> <td>Practical application of all production - functions</td> </tr> <tr> <td>Enabling the student to understand - production and cost functions</td> <td>Douglas -Practical application of the Cobb - production function</td> </tr> <tr> <td>the Enabling the student to know - profit function</td> <td></td> </tr> <tr> <td>The student can judge any stage of - production</td> <td></td> </tr> <tr> <td>Enabling the student to understand - Douglas production function -the Cobb and its economic derivatives</td> <td></td> </tr> </table>			theoretical	practical	the student to understand Enabling - and comprehend what is related to the economics of agricultural production	Enabling the student to identify the laws -ities, the optimal and derivatives of elastic volume of production , and the optimal profit	Enabling the student to know the factors of production	Practical application of all production - functions	Enabling the student to understand - production and cost functions	Douglas -Practical application of the Cobb - production function	the Enabling the student to know - profit function		The student can judge any stage of - production		Enabling the student to understand - Douglas production function -the Cobb and its economic derivatives	
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<b>9. Teaching and learning strategies</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">Strategy</td> <td style="width: 90%;">           theoretical            - lecture Interactive            Brainstorming            - Dialogue and discussion            - Assigning tasks and reporting            -Presentations of models of cost and production functions             practical            -Assigning group work to reveal leadership skills         </td> </tr> </table>			Strategy	theoretical - lecture Interactive Brainstorming - Dialogue and discussion - Assigning tasks and reporting -Presentations of models of cost and production functions  practical -Assigning group work to reveal leadership skills												
Strategy	theoretical - lecture Interactive Brainstorming - Dialogue and discussion - Assigning tasks and reporting -Presentations of models of cost and production functions  practical -Assigning group work to reveal leadership skills															

-Assign tasks and report for each chapter

is assigned to prepare a report entitled "From His Efforts" and prepare it for the Students ...discussion with



week	watche	Required learning outcomes	Name of unit or topic	Learning method	Evaluation method
	2 theoretical	A1 Knows the economics of agricultural production and explains its and objectives	Basic principles of agricultural production economics	Auditory methods Blackboard writing style Direct dialogue style report Assignment and	short exams Duty discussions
1	3 practical	B1 Explains the scope of agricultural research in production economics	Examples of production economics	Auditory methods Blackboard writing style Direct dialogue style report Assignment and	short exams Duty discussions
	2 theoretical	B2 Shows the factors of agricultural production	Labor, Land Capital, Management and Organization	Auditory methods Blackboard writing style Direct dialogue style report Assignment and	short exams Duty discussions
2	3 practical	B3 shows the characteristics of agricultural production factors	Discuss with students the characteristics of each factor of agricultural production	Auditory methods Blackboard writing style Direct dialogue style report Assignment and	short exams Duty discussions
	2 theoretical	B4 Explains the between relationships resources and agricultural production	The relationship between productive resources	Auditory methods Blackboard writing style Direct dialogue style report Assignment and	short exams Duty discussions
3	3 practical	B5 shows the productive resources	Charting and Exercise Assignment	Auditory methods Blackboard writing style Direct dialogue style report Assignment and	short exams Duty discussions
	2 theoretical	B6 explains the economic derivatives of the production function	Explains the economic derivatives of the production function	Auditory methods Blackboard writing style Direct dialogue style report Assignment and	short exams Duty discussions
4	3 practical	C1 Derivatives with exercises on derivatives	Derivatives with exercises economic on derivatives	Auditory methods Blackboard writing style Direct dialogue style report Assignment and	short exams Duty discussions
	2 theoretical	B7 illustrates the law of diminishing returns	The law of diminishing returns explains	methods Auditory Blackboard writing style Direct dialogue style report Assignment and	short exams Duty discussions
5	3	C2 Draw the law and	Draw the law	Auditory methods	short exams

		solve exercises	solve exercises	Blackboard writing style Direct dialogue style report Assignment and	Duty discussions
	practic al	A2 Knows the concept of costs And learn about the types of costs	Knows the concept of costs And identify the types of direct and indirect costs	Auditory methods Blackboard writing style Direct dialogue style Assignment of tasks	short exams Duty discussions
6	theoreti cal	C3 Analyzes the economic derivatives of and its the cost function types	Analyze the economic derivatives of the cost function with drawing	Auditory methods writing Blackboard style Direct dialogue style Assignment of tasks	short exams Duty discussions
	practic al	B8 shows the optimal size of a production resource for a production function with a single variable resource	It shows the optimal size of a production resource for a production function with one variable resource	Auditory methods Blackboard writing style Direct dialogue style report Assignment and	short exams Duty discussions
7	theoreti cal	C4 Draw a graph with solved exercises	Chart with exercises	Auditory methods Blackboard writing style Direct dialogue style report Assignment and	short exams Duty discussions
	practic al	B9 shows the demand curve for an element of production	The demand curve for a factor of production is shown	Auditory methods Blackboard writing style Direct dialogue style report Assignment and	short exams Duty discussions
8	theoreti cal	C5 Draw the curve with exercises	Drawing a curve with exercises	Auditory methods Blackboard writing style Direct dialogue style report Assignment and	short exams Duty discussions
	practic al	B10 illustrates the production function for two suppliers	Illustrates the production function for two suppliers (Cobb-Douglas function)	Auditory methods Blackboard writing style Direct dialogue style report Assignment and	short exams Duty discussions
9	theoreti cal	C5 Draw a graph with exercises	Draw a graph with exercises	Auditory methods Blackboard writing style	short exams Duty discussions

10	2 theoretical	C6 applies both output and output curves	Applies both production and demand curves	Direct dialogue style report Assignment and Auditory methods Blackboard writing style short exams Duty discussions
10	3 practical	C7 indifference Draws curves with their shapes	Draws indifference curves with their shapes	Direct dialogue style report Assignment and Auditory methods Blackboard writing style short exams Duty discussions
11	2 theoretical	B11 illustrates the elasticity of resource substitution	Demonstrates the flexibility of resource substitution	Direct dialogue style report Assignment and Auditory methods Blackboard writing style short exams Duty discussions
11	3 practical	C8 derives flexibility	Derives flexibility	Direct dialogue style report Assignment and Auditory methods Blackboard writing style short exams Duty discussions
12	2 theoretical	B12 shows isocost lines	Illustrates isocost lines	Direct dialogue style report Assignment and Auditory methods Blackboard writing style short exams Duty discussions
12	3 practical	C9 Draw cost lines with solved exercises	Consumer Report and Discussion	Direct dialogue style report Assignment and Auditory methods Blackboard writing style short exams Duty discussions
13	2 theoretical	B13 Explains the combination of resources that maximizes the profits of the establishment	-Profit maximizing resource combination	Direct dialogue style report Assignment and Auditory methods Blackboard writing style short exams Duty discussions
13	3 practical	C10 Derives the profit function	Derives the profit function	Direct dialogue style report Assignment and Auditory methods Blackboard writing style short exams Duty discussions
14	2 theoretical	C11 Derive the cost function Ducas -using the Cobb function	Derive the cost function using the Cobb Ducas function	Direct dialogue style report Assignment and Auditory methods Blackboard writing style short exams Duty discussions
14	3 practical	C12 Derive the cost function	Report and discussion	Direct dialogue style Auditory methods Blackboard writing style short exams Duty discussions

			report Assignment and	
15	2 theoretical	A3 I am given homework on how to Deriving costs from the Duclas function -Cobb the What are functions derived from -Cobb the Duclas "function	Auditory methods Writing style on Direct blackboard dialogue style report Assignment and	short exams Duty discussions
	3 practical	A4 Conducting a field visit to one of the companies	Conducting a visit to field one of the companies	report Assignment and



Course Evaluation - 1			
Evaluation methods	Calendar week-appointment	degree	Relative weight %
1 Final theoretical + report	15-1 My theory week	5	5
2 Short Test 1	Week 3	5	10
2 Quiz		5	
3 Midterm exam	Week 9	10	15
3 Theoretical and practical		5	
4 Short Test 2	Week 12	5	10
4 Quiz		5	
5 Final practical exam	Practical exam week	20	20
5 Final theoretical exam	Theoretical exam week	40	40
the total		100	100

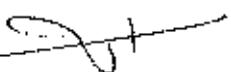
#### Learning and teaching resources - 12

(Unit Economics Theory, Dominic Salvatore (Schaum Series

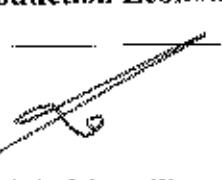
Introduction to Microeconomics, Dr. Muhammad Ahmad Effendi, 2012

• Microeconomic Theory, Ahmed Zoubir Jaata

Ruwais, King Saud -Dr. Khaled Al - Lectures in Agricultural Production Economics University



Theoretical Subject Teacher  
Dr. Ahmed Hashim Ali



Practical Subject Teacher  
Dr. Muna Abdel Qader Ahmed



Head of the Department of Agricultural Economics  
Prof. Dr. Alaa Muhammad Abdullah



Head of the Scientific Committee  
Prof. Dr. Alaa Muhammad Abdullah

## Course Description Form

Course name : 1	Agriculture credit
Course code Code : 2	AGCR387
Year Chapter : 3	2025-2024 / semester
Date this description was prepared : 4	2024/9/1
Available attendance forms : 5	online + person

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

units 3.5 / hours 75

(if more than one name is mentioned) Course Supervisor Name : 7

[amint380@uomosul.edu.iq](mailto:amint380@uomosul.edu.iq) : Email

Amina Abdul A -h Hamdoun Al  
M.M. Osama Laith Muhammad

### objectives Course : 8

: practical

: theoretical

Enabling the student to understand and -  
comprehend the concepts related to agricultural  
lending and borrowing + financing

Enabling the student to understand and -  
comprehend what is related to agricultural  
finance

Enabling the student to know the sources of -  
. funding

Enabling the student to understand the nature -  
. and importance of agricultural finance

dent to know the difference Enabling the stu -  
. between agricultural financing and lending

Enabling the student to know research -  
. agricultural finance methods in

Enabling the student to know the factors that -  
led to the expansion of agricultural lending and  
the principles that must be taken into account in  
. lending

Enabling the student to know the importance -  
. the elements of .of agricultural lending  
and the characteristics of agricultural lending  
. agricultural lending

ow the types of Enabling the student to kn -  
. advances in detail

Enabling the student to know the -  
. classification of agricultural loans

Enabling the student to know the divisions of -  
. capital

Enabling the student to understand the -  
. concept of human capital

Enabling the student to know the optimal use of -  
. capital

the marginal Enabling the student to know -  
. efficiency of capital

The student can learn the basic rules for -  
. granting loans

The student can learn about the supply and  
demand for agricultural loans and the factors  
. affecting them

and The student's awareness of the knowledge -  
explanation of borrowing and the risk ratio in

the principles that must earnThe student can l -  
be taken into account when repaying

<p>granting loans.</p> <ul style="list-style-type: none"> <li>- The student's awareness of the knowledge and explanation of borrowing and the risk ratio in agricultural projects.</li> </ul> <p>The student can learn how to pay the advance, partial, full, variable, and optional payments.</p> <p>The student can learn how to determine the interest rate according to the classical and Keynesian theories..</p> <p>The student can identify the problems and advantages of agricultural lending and explain the rules of directed agricultural lending.</p> <ul style="list-style-type: none"> <li>- The student can learn the basic principles of agricultural insurance..</li> </ul>	<p>affecting them.</p> <ul style="list-style-type: none"> <li>- The student can learn the principles that must be taken into account when repaying agricultural loans and the time preference of money.</li> </ul> <ul style="list-style-type: none"> <li>- The student can learn about the methods of repaying agricultural loans and explain them in detail, such as the method of extinguishing the loan.</li> </ul> <p>The student can identify and explain the types of interest on capital.</p> <p>The student can learn about the nature and importance of cooperative agricultural lending and directed agricultural lending. And compare them</p> <ul style="list-style-type: none"> <li>- The student can learn about agricultural credit and agricultural insurance.</li> </ul>
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### Teaching and learning strategies

Strategy
Interactive lecture: brainstorming, dialogue and discussion explaining the concept and importance of agricultural finance
Interactive lecture: brainstorming, dialogue and discussion on sources and methods of agricultural financing
Interactive lecture, brainstorming, explaining the functions, tools and elements of agricultural lending.
Interactive lecture, brainstorming and comparison between agricultural financing and agricultural lending.
Interactive lecture, brainstorming, dialogue and discussion on the difference between demand and supply for agricultural loans.
Interactive lecture, brainstorming, dialogue and participation in clarifying the divisions of capital, the optimal use of capital, the marginal efficiency of capital and the time preference of money.
Interactive lecture, brainstorming, dialogue and discussion, assignment and report
Interactive lecture, brainstorming, dialogue and discussion, assignment and report
Interactive lecture, brainstorming, dialogue and discussion, assignment and report
Interactive lecture, brainstorming and comparison between wave and in-kind agricultural loans
Interactive lecture, brainstorming, dialogue and discussion on loan repayment methods and basic rules for granting agricultural loans.
Interactive lecture, brainstorming, dialogue and discussion, comparison between the concepts of insurance and agricultural credit
Interactive lecture, brainstorming, dialogue and discussion on the concept of agricultural lending, its problems and agricultural insurance
He is responsible for the basic rules of insurance and developing a short-term (one year) borrowing and repayment plan

He is assigned the task of solving an exercise and graphs of the marginal efficiency of capital

IOC course structure					
Evaluation method	Learning method	Name of unit or topic	Required learning outcomes	watch SS	Week
of agricultural financing <b>short exams</b> Duty discussions	<b>theoretical</b> Auditory methods Blackboard writing style Direct dialogue style		A1 The student learns about the nature and concept of agricultural finance.	2 theoretical	First week
short exams Duty discussions	practical Assignment of tasksAnd report	Concepts related to the nature and methods of agricultural financing	B11 showsResearch methods in the study of agricultural finance	3 practical	1
of agricultural financing <b>short exams</b> Duty discussions	<b>theoretical</b> Auditory methods Blackboard writing style Direct dialogue style		B1 Explains to the student the difference between sources of agricultural financing and lending.	2 theoretical	Second week
short exams Duty discussions	practical Assignment of tasksAnd report	Methods for measuring sources of agricultural financing and lending	B12 Solves methods for measuring funding sourcesAgricultural lending	3 practical	2
of agricultural loans <b>short exams</b> Duty discussions	<b>theoretical</b> Auditory methods Blackboard writing style Direct dialogue style practical Assignment of tasksAnd report		A2 The student explains the basic principles that must be taken into account in agricultural lending.	2 theoretical	The third week
short exams Duty discussions	practical Assignment of tasksandReport	Elements, functions and tools of agricultural lending	B13 shows the elements of agricultural lending and the functions of agricultural lending.	3 practical	3

The concept of capital	theoretical		B2 The student is given the divisions of capital and the comparison between them.	2	theoretical	Week 4
Types of capital discussions	Auditory methods Blackboard writing style Direct dialogue style					
short exams Duty discussions	practical Assignment of tasksAnd report	Optimal use of capital, time preference for money, marginal efficiency of capital Factors affecting the marginal efficiency of capital	B14 Mathematical applications on how to calculate the marginal efficiency of capital	3	practical	4
short exams Duty discussions	theoretical Auditory methods Blackboard writing style Direct dialogue style		B3 shows the classification of agricultural commodities and types of agricultural loans.	2	theoretical	Week 5
short exams Duty discussions	practical Assignment of tasksAnd report	Multiplier and accelerator	B15 Shows the effect of the multiplier idea and the principle of acceleration.	3	practical	5
short exams Duty discussions	theoretical Auditory methods Blackboard writing style Direct dialogue style	Interest rate and factors affecting it	B4 Explain the concept of interest rate, factors affecting the interest rate of capital and the optimal use of capital.	2	theoretical	Week 6
short exams Duty discussions	practical Assignment of tasksAnd report	Factors affecting the multiplier and accelerator	B16 Recognizes the overlap and interchangability between the multiplier and the accelerator in agricultural investments.	3	practical	6
agricultural Loans&Repayments	theoretical		B5 explains the	2		Week 7

e supply of agricultural discussions	Auditory methods Blackboard writing style Direct dialogue style		presentation on agricultural loans, the most important factors affecting them.	theore tical	
short exams Duty discussions	practical Assignment of tasksAnd report	Income, marginal propensity to consume, and marginal propensity to save in hypothetical examples	C4 governs the shape of the relationship between income, marginal propensity to consume, and marginal propensity to save in hypothetical examples.	3 practic al	7
short exams Duty discussions	theoretical Auditory methods Blackboard writing style Direct dialogue style	Agricultural Loan Application Factors affecting the demand for agricultural loans	B6 State the demand for agricultural loans and the supply of agricultural loans.	2 theore tical	Week 8
short exams Duty discussions	practical Assignment of tasksAnd report	Borrowing and risk ratio in agricultural projects	B17 shows hypothetical examples of marginal analysis in arriving at the optimal loan size when directed towards the chosen purpose.	3 practic al	8
short exams Duty discussions	writing on the board Direct dialogue style	Features and characteristics of agriculture and its relationship to agricultural lending	A3 Explain the characteristics of agriculture and its relationship to agricultural lending.	2 Theor etical	Week 9
short exams Duty discussions	practical Assignment of tasksAnd report	Some global and local experiences of selected countriesIn determining the interest rate	B18 shows how the interest rate is determined according to classical and Keynesian theory.	3 practic al	9
short exams Duty	theoretical Auditory	The principle of multiplier and	C1 Compare the multiplier and accelerator in how	2 theore tical	Week 10

	discussions	methods Blackboard writing style Direct dialogue style	accelerator Interest rate concept Factors affecting the interest rate of agricultural loans	agricultural loans affect the volume of agricultural production and economic activity. Compares interest rate types Apply examples of interest rate types and forms	tical
	short exams Duty discussions	practical Assignment of tasksAnd report	Factors affecting the interest rate of agricultural loans	B19 Apply examples of interest rate types and forms	3 practical 10
	short exams Duty discussions	theoretical Auditory methods Blackboard writing style Direct dialogue style	Principles to be taken into account when repaying agricultural loans	C2 determines the principles to be taken into account in repaying agricultural loans.	2 theoretical Week 11
	short exams Duty discussions	practical Assignment of tasksAnd report	Risk and borrowing in agricultural projects	B20 Application of borrowing and risk ratio in agricultural projects	3 practical 11
	short exams Duty discussions	theoretical Auditory methods Blackboard writing style Direct dialogue style	The multiplier and accelerator principle (marginal propensity to save and marginal propensity to consume)	B7 Explains to the student the nature of the mutual interaction between the multiplier and the accelerator when investing.	2 theoretical Twelfth week
	short exams Duty discussions	practical Assignment of tasksAnd report	Calculating the acceleration or increase rate	B21 Apply the variance of cash flow probabilities for two different projects	3 practical 12
		theoretical Auditory methods Blackboard writing style Direct dialogue style	General concepts of agricultural lending	B8 Explains directed and in-kind agricultural lending and the problems of agricultural lending in Iraq	2 theoretical thirteen week
	short exams Duty	practical Assignment of	Types of agricultural lending	C5 Exercises and examples on types	3 practical 13

discussions	tasksAnd report	The concept of risk, uncertainty, and risks of agricultural finance and credit.	of agricultural loans B9 mentions the risks, uncertainties and risks of agricultural financing and credit.	al
short exams	practical Assignment of tasksAnd report	Loan granting and repayment costs	C6 Exercises on Loan Costs and Applications	2 Fourteenth week practical
Duty discussions	theoretical	Borrowing plans Loan repayment methods	B10 Applying a short-term borrowing and repayment plan (one year).	14
short exams	Auditory methods			2
Duty discussions	Blackboard writing style			theoretical Week 15
	Direct dialogue style			
short exams	practical	Writing a report on the scientific visit	Scientific visit	
Duty discussions	Assignment of tasksAnd report	Examples and exercises using hypothetical tables for loan amortization methods	C7 Partial Payment Method and Loan Amortization Method (Loan Amortization) Excercises.roadPayment in equal installments, payment in decreasing or decreasing installments, and finally payment in ascending installments.	3 practical 15

#### 11. Course Evaluation

Relative weight %	degree	Calendar appointment - week	Evaluation methods
5	5	My theory of the week1-15	Final theoretical report
10	5	week 3	Short test 1 Quiz

Course Evaluation - II				
Relative weight %	degree	Calendar week-appointment	Evaluation methods	T
5	5	15-1 My theory week	Final theoretical report +	1
10	5 5	Week 3	Quiz 1 Short Test	2
15	10 5	Week 9	Midterm theoretical and practical exam	3
10	5 5	Week 12	Short 2Test Quiz	4
20	20	Practical exam week	Final practical exam	5
40	40	Theoretica l exam week	Final theoretical exam	6
100	100		the total	

#### Learning and teaching resources - 12

Mashhadani-Abdullah Mohammed Al Dr :Agricultural Financing and Lending  
Internet sources

Hisham Hamedoun-Amina Abdel .Ms .Asst :Theoretical subject teacher

Osama Laith Muhammad .M.M :Practical subject teacher

.Dr .Prof alaa mohamad abdula :Head of the Scientific Committee

Head of the Department of Agricultural Economics

Dr .Prof alaa mohamad abdula

## Course Description Form

agricultural marketing Course name .1	
AGMA442 : Course code .2	
2025-2024 First semester Year / Semester .3	
10/4/971 Date of preparation of this description .4	
one + person-In Available attendance forms .5	
hours / 3.5 units75 : (Number of study hours (total) / Number of units (total) .6	
Name of the course supervisor (if more than one name is mentioned) .7 Abdel Assistant Professor Ahmed( Dr. Aswan Abdel Qader Asst. Prof (AZIZ)	
objectives Course .8	
<p>:practical</p> <p>Enabling the student to learn about – electronic marketing and market research methods</p> 	<p>:theoretical</p> <p>Enabling the student to understand and to agricultural comprehend what is related marketing</p> <p>markets the Enabling the student to know and intermediaries in the marketing path</p> <p>the Enabling the student to understand market demand curve</p> <p>to know contracts, Enabling the student their advantages and disadvantages</p> <p>learn about agricultural The student can .riceprices and the equilibrium p</p>
strategies learning Teaching and .9	

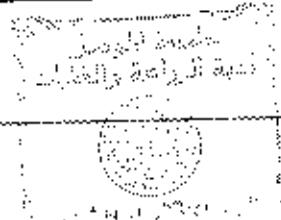
:practical	:theoretical
The assignment of collective action skills reveal leadership To	Interactive damage The eraser
Assign tasks and report for each chapter	Brainstorming
	Dialogue and discussion
	Assignment and report
	for market models and brokers Offers
	He is assigned to prepare a report entitled "stroffE siH morF"
	noissucsid rof ti eraperp dna Students ...with

Headquarter structure .10					
Evaluation method	Learning method	Name of unit or topic	Required learning outcomes	watchers	Weeks
Short exams, homework, discussions	:My theory Methods Auditory writing style on the board Direct dialogue style :Practical Assignment And of tasks report	:My theory Principles of Agricultural Marketing : practical Examples of agricultural marketing	My theory: The concept of agricultural marketing and its importance to the producer, consumer, and intermediaries those working ) in agricultural (marketing : Work Agricultural Marketing	theoretical 2 practical 3	1



Short exams, homework assignments, discussions	:My theory Methods Auditory writing style on the board Direct dialogue style :Practical Assignment And of tasks report	:My theory Marketing jobs : practical Students discuss markets	:theory My The introduction to marketing studies includes the commodity approach and includes exchange functions buying and ) .(selling Explains : practical the markets	theoretical 2 practical 3	2
Short exams, homework assignments, discussions	:My theory Methods Auditory writing style on the board Direct dialogue style :Practical Assignment And of tasks report	:My theory Storage and transportation My job is to assign a report and discuss it	:My theory Explains practical and functions services including storage and transportation Practical: Explains methods of studying agricultural markets	theoretical 2 practical 3	3
Short exams, homework assignments, discussions	Methods Auditory writing style on the board Direct dialogue style :Practical Assignment of tasks And report	:My theory Equipment, financing and assembly : practical Price chart and equilibrium price	:My theory Explains the functions and facilitating services including assembly, processing, and financing : practical Explains	theoretical 2 practical 3	4

			agricultural prices and pricing .policies		
Short exams, homework assignments, discussions	:My theory Methods Auditory writing style on the board Direct dialogue style :Practical Assignmen t of tasks And report	: My theory Advertising, packaging, filling and staging : practical Field visit to the markets	:My theory Explains advertising, packaging, its importance and levels, packing and its principles, grading and .similarity :practical Explains how to prepare fruits and vegetables for .marketing	theoretical 2 practical 3	5
Short exams, homework assignments, discussions	:My theory Methods Auditory writing style on the board Direct dialogue style :Practical Assignmen t of tasks And report	: My theory Learn about the markets types of and types of intermediaries in the marketing .process : practical Explains how to market a fruit or .vegetable	:theory My Learn about the types of markets and types of intermediaries in the marketing .process :practical Explains how to market vegetables and fruits	theoretical 2 practical 3	6
Short exams, homework assignments, discussions	:My theory Methods Auditory writing style on the board Direct dialogue style :Practical Assignmen	Explains :My theory their ,contracis definition, advantages and disadvantages for the farmer, and their advantages and disadvantages for the .buyer	:My theory Explains contracts, their definition, advantages and disadvantages for farmer, and the their advantages and disadvantages .for the buyer	theoretical 2 practical 3	7

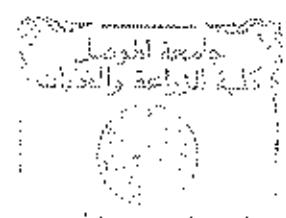


	: practical And report	: practical Gives examples of electronic marketing	: practical Explains electronic marketing	
Short exams, homework assignments, discussions	: My theory Methods Auditory writing style on the board and direct dialogue style	: My theory Explains the origins of food industries, which include (canning, natural and industrial drying, cooking, pasteurization, freezing My work: Identifying the -impact of e the marketing on .marketing mix	: My theory Explains the origins of food industries, which include (canning, ) natural and industrial drying, cooking, pasteurization, freezing My work: the Identifying -Impact of e marketing on the marketing .mix	theoretical 2 practical 3 8

Short exams, homework assignments, discussions	: My theory Methods Auditory writing style on the board Direct dialogue style Practical Assignment of tasks And report	: My theory Explains the demand for agricultural commodities definition of ) ,demand determinants of demand, elasticities of demand, market (demand	: My theory Explains the demand for agricultural commodities definition of ) demand, determinants of demand, elasticities of demand, market (demand	theoretical 2 practical 3 9
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		:practical Graphing a curve with exercises	:practical Graphing a curve with exercises	
Short exams, homework assignments, discussions	:My theory Methods Auditory writing style on the board Direct dialogue style :Practical Assignment of tasks And report	:My theory Applies both production and demand curves My work: Draws indifference curves with their shapes	:My theory Applies both production and demand .curves My work: Draws indifference curves with .their shapes	theoretical 2 practical 3 10
Short exams homework assignments, discussions	:My theory Methods Auditory writing style on the board Direct dialogue style :Practical Assignment of tasks And report	:My theory Applies to laws and elasticity of demand Practical: Graph with examples	:My theory to laws Applies and elasticity of demand Practical: Graph with examples	theoretical 2 practical 3 11



Short exams, homework assignments, discussions	:My theory Methods Auditory writing style on the board Direct dialogue style :Practical Assignment of tasks report And	:My theory Explains the supply of agricultural commodities definition of ) supply, determinants of supply, elasticities) Display, Market :Practical Display Explains the elasticity of supply	:My theory Explains the supply of agricultural commodities definition of ) supply, determinants of supply, elasticities) Display, Market Display :Practical Explains the elasticity of supply	theoretical 2 practical 3	12
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Short exams, homework assignments, discussions	:My theory Methods Auditory writing style board on the Direct dialogue style :Practical Assignment of And tasks report	:My theory Report and discussion Field visit :My work	Theoretical: Applies to the laws and elasticity of supply	theoretical 2 practical 3	13
Short exams, homework assignments, discussions	:My theory Methods Auditory writing style on the board Direct dialogue style :Practical Assignment of And tasks report	:My theory For prices He knows And its agricultural Pricing Footnotes importance Price spread : practical and exercises Examples	:My theory Knows agricultural prices and their importance, price margins, price spread :practical Examples and exercises	theoretical 2 practical 3	14

Short exams, homework assignments, discussions	:My theory Methods Auditory writing style on the board Direct dialogue style :Practical Assignment of And tasks report	My theory: Explains the marketing (its -meaning of e advantages and disadvantages) and its impact .on the marketing mix My work: The main obstacles marketing-to c	:My theory Explains the -meaning of e marketing (its advantages and disadvantages) and its impact on the .marketing mix My work: The main obstacles marketing-to c	theoretical 2 practical 3	15
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#### Course Evaluation 11

Relative %weight	degree	Calendar date (week)	Evaluation methods	1
13%	theoretical 7 + 6 practical	Theoretical 15 week Practical 1-15 week	Final theoretical report + practical reports	1
6%	My 4 + theory 2 practical	3 Week	1 Quiz	2
15%	10 theoretical 5+ practical	9 Week	(Exam (Theoretical and Practical Midterm	3
6%	My 4 + theory 2 practical	12 Week	2 Quiz	4
20%	20	Practical exam week	Final practical exam	5
40%	40	Theoretical exam week	Final theoretical exam	6
100%	100		the total	

#### and teaching resources Learning 12

Book : Dr. Agricultural Marketing  
Diouji -Saeed Al Abi

(Required textbooks (methodology if any

Ahmed .M.M :Practical subject teacher Aswan Abdel Qader Zidane .teacher : Dr subject  
Abdel Aziz

of Head of the Department Qais Nazim Ghazal ,Prof :Head of the Scientific Committee  
Dr. Zwaïd Fathi Abdel : Agricultural Economics

## Agricultural Cooperation Course Description Form

<b>1. Course Name:</b>
Agricultural Cooperation
<b>2. Course Code:</b>
AGCO392
<b>3. Semester / Year:</b>
Second Semester 2025
<b>4. The history of preparation of this description:</b>
1/2/2025
<b>5. Available Forms of Attendance:</b>
Presence+ online
<b>6. Number of credit hours (total) / number of units (total):</b>
45 hours/ 3unit
<b>7. Course administrator's name (if more than one name is mentioned):</b>
Assoc. Prof. Aswan Abdel Qader aswanzedan@uomosul.edu.iq
<b>8. Course Objectives:</b>
Theoretical: <ul style="list-style-type: none"><li>- Enable the student to understand and understand what is related to agricultural assistance</li><li>- Enable the student to know the meaning of agricultural cooperation</li><li>- Enabling the student to familiarize himself with cooperative societies</li><li>- Enabling the student to know the stages of establishing the cooperative society</li><li>- The student can learn about the financing of cooperative societies</li></ul>



## 9. Teaching and Learning Strategies

### Theoretical:

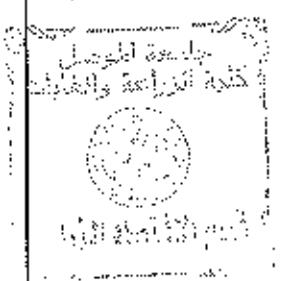
- Interactive Hint
- Brainstorming
- Dialogue and discussion
- Assignment and report
- Offers for market models and brokers



- Assign a report entitled from his diligence and prepare it for discussion with students

## 10. Headquarters structure:

Evaluation method	Teaching method	Unit or subject name	Required learning outcomes	Hours	Time week
Short exams, assignment of assignment, discussions	Audio styles Writing style on the board - direct dialogue style	Definition of general cooperation Definition of innate cooperation Official definitions of cooperation	B1shows concepts and definitions of cooperation	3theoretical	1
Quizzes, Assignments, Discussions	Audio styles Writing style on the board - direct dialogue style	Characteristics of the cooperative	B2explains the basic qualities of a cooperative	3theoretical	2

					
<b>Quizzes, Assignments, Discussions</b>	<b>Audio styles Writing style on the board - direct dialogue style</b>	<b>Economic Objectives  Social Goals</b>	<b>B3shows the objectives of the association  Economic and Social Cooperative Society</b>	<b>3theoretical</b>	<b>3</b>
<b>Quizzes, Assignments, Discussions</b>	<b>Audio styles Writing style on the board Direct dialogue style Practical:  Assignment and report</b>	<b>The development of the cooperative movement</b>	<b>B4explains the genesis of the cooperative movement and its intellectual and historical development</b>	<b>3theoretical</b>	<b>4</b>

Quizzes, Assignments, Discussions	Audio styles Writing style on the board - direct dialogue style	Theoretical: The historical development of the cooperative movement	B5explains the historical development of the cooperative movement	3theoretical	5
Quizzes, Assignments, Discussions	Audio styles Writing style on the board - direct dialogue style	Basic principles of the cooperative system	A1Recognize the principles and foundations of the cooperative system	3theoretical	6
Quizzes, Assignments, Discussions	Audio styles Writing style on the board - direct dialogue style	Developments on the principles and foundations of cooperation	B6explains developments on the principles and foundations of cooperation	3theoretical	7
Quizzes, Assignments, Discussions	Audio styles Writing style on the board - direct dialogue style	The difference between cooperative societies and capitalist companies and the difference between cooperatives and a charity	B7shows cooperative societies and distinguishes them from other economic and social institutions	3theoretical	8

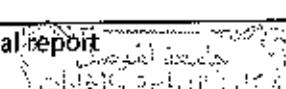
Quizzes, Assignments, Discussions	Audio styles Writing style on the board - direct dialogue style	Similarities and differences between the two philosophies	C1analyzes and discusses the philosophy of the pioneers of socialism and the philosophy of cooperation	3theoretical	9
Quizzes, Assignments, Discussions	Audio styles Writing style on the board - direct dialogue style	Types of cooperative societies	B8shows the types of cooperative societies	3theoretical	10
Quizzes, Assignments, Discussions	Audio styles Writing style on the board - direct dialogue style	Cooperative societies of consumers and producers	B9clarifies cooperatives for consumers and producers	3theoretical	11

Quizzes, Assignments, Discussions	Audio styles Writing style on the board - direct dialogue style	Stages of authorship of any cooperative society	B10 Illustrates the composition of the cooperative	3theoretical	12
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Quizzes, Assignments, Discussions	Audio styles Writing style on the board - direct dialogue style	Report & Discussion	A2 defines funding for cooperative societies	3theoretical	13
Quizzes, Assignments, Discussions	Audio styles Writing style on the board - direct dialogue style	Writes a report on agricultural advances	For11  Shows the types of agricultural advances	3theoretical	14

Quizzes, Assignments, Discussions	Audio styles Writing style on the board - direct dialogue style	Explains the types of cooperative agricultural credit	B12  Explain the types of cooperative agricultural credit	3 theoretical	15
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#### 11. Course Evaluation

Relative Weight%	Grade	Calendar date (week)	Evaluation methods	
%5	5	Theoretical week 1-15	Theoretical final report 	1
%10	10	Week 3	Quiz 1 Quiz 	2
%15	15	Week 9	Midterm Theoretical Exam	3
%10	10	Week 12	Quiz 2 Quiz	4
%60	60	Theoretical exam week	Final theoretical test	5
%100	100	Total		

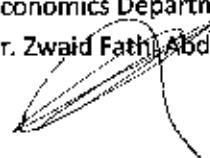
#### 12. Learning and Teaching Resources

The Economics of Agricultural Cooperation: Abdul Wahab Matar Al-Daheri, 1980

From the Internet

Subject Teacher : Dr. Aswan Abdel Qader Zidan

**Chairman of the Scientific Committee: Prof. of Agricultural Economics Department: Prof. Qais Nazim  
Ghazal Head of the Department of Agricultural Economics: Dr. Zwaid Fathi Abdel**



X



## Course Description Form

1. Course name	Operations Research		
2. Course code/Code	OPRE394		
3. Semester/Year	Chapter 1 For my second study/third stage/2024-2025		
4. Date this description was prepared	1/2/2025		
5. Available attendance forms	In-person + online		
6. Number of study hours (total) / Number of units (total)	<b>Theoretical hours: 30 hours / Practical hours 45, number of units 3.5</b> Online		
7. Name of the course administrator (if more than one name is mentioned)	Name: Asst. Dr. Mona Abdel Qader Ahmed Email: mona@uomosil.edu.q Name: M. Salah Fahmy Shaba Email: salah@uomosil.edu.q		
Course Objectives			
<b>practical:</b>		<b>theoretical:</b>	
<p>The student learns how to Uses operations research models and stages</p> <p>How to formulation or construction Linear programming model</p> <p>How to formulation or construction Mathematical model</p> <p>How to solution Linear programming model using graph</p> <p>The student learns graphically and mathematically. Special cases in linear programming</p> <p>Yto learn toFor the student of the method transformation Linear Programming Model from Initial Forms to Standard Form</p> <p>Explain to the student Cases Special problems when solving using the simplex method</p> <p>How to solution The issue of balanced transportation Mathematically</p> <p>How to solution The issue of balanced transportation Northwest Method Mathematically</p> <p>How to solution The issue of balanced transportation In a less mathematically expensive way</p> <p>How to solution The issue of balanced transportation Vogel's mathematical method</p> <p>How to solution The issue of transportation by method Other balanced Mathematically</p>		<p>The student learns about concept Operations research and its historical development</p> <p>Shows the student The role and methods of operations research in decision making</p> <p>The student gets to know On the concept of linear programming</p> <p>Explain to the student requirements And assumptions and areas of use Linear programming</p> <p>How to installation Linear programming model</p> <p>Shows Steps to find the optimal solution in linear programming</p> <p>The student learns about the mechanism of simplex operation.</p> <p>Explain to the student Simplex solution procedures</p> <p>Explain to the student General framework for balanced transport problems</p> <p>Shows the student problem Balanced transport Northwest Method</p> <p>Shows the student problem Balanced transport The least expensive way</p> <p>Shows the student problem Balanced transport Vogel's method</p> <p>The student learns about The problem of unbalanced road transport</p>	

How to Solving transportation problems imbalance of supply and demand and Profit maximization case and presence more From the solution Ideal and State of dissolution Graphically and mathematically

**learn Student How to Make Decisions in Uncertainty**

The student learns how to Solving practical examples of simulation



The student learns about Cases especially when solving transportation problems, imbalance of supply and demand and Profit maximization case and presence more From the solution Ideal and State of dissolution.

To get to know the student on The most important problems in administrative decision-making

**learn Student How to Make Decisions in Uncertainty**

recognize For students On simulation and methods of studying it

Teaching and learning strategies - 2	
Interactive lecture; brainstorming, dialogue and discussion. Explaining the role of operations research in decision-making.	Strategy
Interactive lecture: Brainstorming, dialogue and discussion in the stages of quantitative analysis of operations research	
Interactive lecture, brainstorming, explaining linear programming and its uses	
Interactive lecture and brainstorming to formulate and build a linear programming model	
Interactive lecture, brainstorming, dialogue and participation in evaluating the steps to find the optimal solution	
Interactive lecture, brainstorming, dialogue and participation in How does the simplex method work?	
Interactive lecture, brainstorming, dialogue and discussion, assignment and report	
Interactive lecture, brainstorming, dialogue and discussion, assignment and report	
Interactive lecture, brainstorming, dialogue and discussion, assignment and report	
Interactive lecture, brainstorming and comparison between balanced and unbalanced transportation problems	
Interactive lecture, brainstorming, dialogue and discussion	
Interactive lecture, brainstorming, dialogue and discussion, assignment and report	
Interactive lecture, brainstorming, dialogue and discussion	
He is assigned a task to draw the optimal region for linear programming.	
You are assigned the task of solving exercises on various transportation problems using balanced and unbalanced methods.	

Week 1		Week 2		Week 3	
Week 4		Week 5		Week 6	
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	Definition of operations research Historical development of operations research The role of operations research in decision making Operations research methods	A1 The student learns about concept Operations research and its historical development B1 shows the student The role and methods of operations research in decision making	C1 The student learns how to Uses operations research models and stages	3 practical 1
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	The concept of linear programming Requirements and assumptions of the linear programming model Journals using linear programming	A2 The student recognizesOn the concept of linear programming B2 explains to the student requirements And assumptions and areas of use Linear programming	D1 How to formulation or constructionLinear programming model D2 How to formulation or construction Mathematical model	2 theoretical
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	Formulate or build a linear programming model Formulating the mathematical model	B3 How to installationLinear programming model	2 theoretical	The third week
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style	Linear programming model installation			

	Assignment and report	Certainty cases in linear programming		
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	solutionLinear programming model usingroadthe solutionThe graph	D3How tosolution!incat programming model usingroadthe solutionThe graph	3 practica st
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	stepsFinding the optimal solution	B4ShowsSteps to find the optimal solution in linear programming	2 theoreti cal
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	CasesEspecially in the graphic solution	C2 The student learns graphically and mathematically.Special cases in linear programming	3 practica 1
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	How does the simplex method work?	A2The student learns about the mechanism of simplex operation.	2 theoreti cal
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	transformationLinear Programming Model from Initial Forms to Standard Form	B5Yto learn toFor the student of the methodtransformationLinear Programming Model from Initial Forms to Standard Form	3 practica 1
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	proceduresSimplex solution	B6Explain to the studentSimplex solution procedures	2 theoreti cal
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment of tasks	CasesSpecial problems when solving using the simplex method	C3Explain to the studentCasesSpecial problems	3 practica 1

		Assignment of tasks		when solving using the simplex method	
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment of tasksAnd report	Auditory methods Blackboard writing style Direct dialogue style Assignment of tasksAnd report	frameworkGeneral problem of balanced transport	B7 explains to the studentGeneral framework for balanced transport problems	2 theoretical
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment of tasksAnd report	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	solutionThe issue of balanced transportation	D4 How to solutionThe issue of balanced transportationMathematically	3 practical 1
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	roadNorthern cornerWestern	C4Shows the student problemBalanced transportNorthwest Method	2 theoretical
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	Auditory methods Blackboard writing style Direct dialoguc style Assignment and report	Mathematical solution toroadNorthern cornerWestern	D5 How to solutionThe issue of balanced transportationNorthwest Method Mathematically	3 practical 1
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	roadLower costs	C5Shows the student problemBalanced transportThe least expensive way	2 theoretical
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	Mathematical solution in a less expensive way	D6 How to solutionThe issue of balanced transportationFor a less expensive mathematical method	3 practical 1
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment of tasks	Auditory methods Blackboard writing style Direct dialogue style Assignment of tasks	roadVogel	C6Shows the student problemBalanced transportVogel's method	2 theoretical
					Week 10

short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment of tasks	Vogel's mathematical solution frameworkThe general problem of unbalanced transportation	D7 How to solutionThe issue of balanced transportationVogel's method mathematically ..	3 practica 1	Week eleven
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report		B8 The student learns aboutThe problem of unbalanced load transport	2 theoreti cal	
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report		D8 How to solutionThe issue of transportation by methodOtherbalancedMathema tically	3 practica 1	
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report		B9 The student learns aboutCasesThe Especially when solving transportation problems, imbalance of supply and demand Profit maximization case	2 theoreti cal	
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report			2 theoreti cal	
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report			2 theoreti cal	
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report			2 theoreti cal	
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report			2 theoreti cal	

short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	Exercises and charts Special cases when solving transportation problems There is more than one optimal solution State of dissolution	D10 How to Solving transportation problems There is more than one optimal solution State of dissolution mathematically	3 practica l State of dissolution
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	Administrative decision- making problems Decision-making situations Cases of non-Verify	B11 Y to get to know the student on The most important problems in administrative decision-making	2 theoreti cal Fourteenth week
short exams Duty discussions	Auditory methods Blackboard writing style Direct dialogue style Assignment and report	Decision-making models under uncertainty	C7learn The student How to make decisions in situations of uncertainty	3 practica l C7learn
short exams Duty discussions	Writing style on blackboard Direct dialogue style Assignment and report	Simulation: MethodsQ Simulation study	B12recognize or studentsOn simulation and methods of studying it	2 theoreti cal Week 15
short exams Duty discussions	Writing style on blackboard Direct dialogue style Assignment and report	Simulation: MethodsQ Study/Applied Examples	C8 The student learns how to Solving practical examples of simulation	3 practica l

**11 Course evaluation**

Relative weight %	degree	Calendar appointment - week	Evaluation methods	T
5	5	My theory week 1-15	Final theoretical report +	1
10	5 5	Week 3	Short Test 1 Quiz	2
15	10 5	Week 9	Midterm exam Theoretical and practical	3
10	5 5	Week 12	Short Test 2 Quiz	4
20	20	Practical exam week	Final practical exam	5
40	40	Theoretical exam week	Final theoretical exam	
100	100		the total	

**12 Learning and teaching resources**

Introduction to Operations Research / Adnan Shankhi / Dhuya Salman Operations Research and Decision Making, Dr. Afif Ali Hassan Al-Dash, 2012 Modern books in quantitative methods/decision making.	1- Required textbooks
	2- Main references (sources)
Building Mathematical Models // Local and international journals specialized in the field of operations research and quantitative management. Iraqi Virtual Library/External Internet Research.	A. Recommended books and references (scientific journals, reports)  B - Electronic references, websites...

Theoretical subject teacher Practical subject teacher: Dr. Mina Abdel Qader  
Ahmed

Practical subject teacher: M. Salah Fahmy Shaba

Chairman of the Scientific Committee: prof Dr Qais Nazem Ghazal

Head of the Department of Agricultural Economics : Assistant.  
Prof. Dr. Zwaideh Faithi Abdel

## Course Description Form

	1. Course name <b>economic theory</b> College 1				
	2. Course code Code: <b>MAET385</b>				
	3. semester/year <b>the chapter(the first)the autumn/2024 - 2025</b>				
	4. Date this description was prepared <b>1/9/ 2024</b>				
	5. Available attendance forms: <b>My presence + Electronic</b>				
	6. Number of study hours (total) / Number of units (total) <b>75/ 3.5</b>				
	7. Name of the course administrator (if more than one name is mentioned) <b>Name: Dr. Sara Sael Abdul Email:sura84@uomosul.edu.iq Name: M. Rahal Sobhi Qasim Email:ribal.subhy@uomosul.edu.iq</b>				
	8. Course objectives				
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">practical:</th> <th style="width: 50%;">theoretical</th> </tr> </thead> <tbody> <tr> <td>Explain the difference between macroeconomics, microeconomics, and the circular flow of production and income statement. The student should be able to: Statement on measuring national accounts, including the income method and methods of estimating them Statement of estimation of the composition of these figures using the value-added method The student should be able to derive the savings function from the consumption function. The student should be able to understand saving and its relationship. With modern slopes for consumption and tendency/Average consumption Student statement To understand the impact of change in influencing factors/F income on consumption and savings Y to explain toFor construction and housing projects students - fixed capital formation and the</td> <td>The student should be able to know and understand the definitions of economics. The college and its theories The student should be able to recognize and understand changes in the level of national product. Gross and net domestic product. For student Records The student should be able to: Knowing the components of the national product, explaining the concept of consumption and saving and the relationship between saving and consumption to explain factors affecting savings and effect in addition to the consumption and savings functions The student should be able to know and understand the investment function - the investment curve - the factors affecting the</td> </tr> </tbody> </table>	practical:	theoretical	Explain the difference between macroeconomics, microeconomics, and the circular flow of production and income statement. The student should be able to: Statement on measuring national accounts, including the income method and methods of estimating them Statement of estimation of the composition of these figures using the value-added method The student should be able to derive the savings function from the consumption function. The student should be able to understand saving and its relationship. With modern slopes for consumption and tendency/Average consumption Student statement To understand the impact of change in influencing factors/F income on consumption and savings Y to explain toFor construction and housing projects students - fixed capital formation and the	The student should be able to know and understand the definitions of economics. The college and its theories The student should be able to recognize and understand changes in the level of national product. Gross and net domestic product. For student Records The student should be able to: Knowing the components of the national product, explaining the concept of consumption and saving and the relationship between saving and consumption to explain factors affecting savings and effect in addition to the consumption and savings functions The student should be able to know and understand the investment function - the investment curve - the factors affecting the
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Factors affecting it

Explain to the student The effects of expansionary and contractionary fiscal policy on aggregate demand

Explain to the student The effect of fiscal policy on the classical aggregate supply curve - The effect of expansionary fiscal policy in the classical case

Statement short-run aggregate supply curve



investment demand curve.

The student should be able to know the determinants of national product (aggregate demand, aggregate supply).

**Characteristics of the aggregate demand curve**

- Factors affecting aggregate demand

**Student statement** Variables that are outside the control of the state's overall policy.

The student should be able to know the determinants of national product (aggregate supply).

#### 9. Teaching and learning strategies

Interactive lecture: Brainstorming, dialogue and discussion on the circular flow statement between production and income

Strategy

Interactive lecture brainstorming, dialogue and discussion in analysis Interaction and overlap between the multiplier and the accelerator.

Interactive lecture, brainstorming, explaining national income and its measurement and calculations

Interactive lecture, brainstorming and finding indices for national accounts.

Interactive lecture, brainstorming, dialogue and participation in consumption and its relationship to income

Interactive lecture, brainstorming, dialogue, and participation in understanding the investment function and the factors affecting it.

Interactive lecture, brainstorming, dialogue and discussion, assignment and report

Interactive lecture, brainstorming, dialogue and discussion, assignment and report

Interactive lecture, brainstorming, dialogue and discussion, assignment and report

Interactive lecture and brainstorming The relationship between the Aggregate demand and aggregate supply

Interactive lecture, brainstorming, dialogue and discussion

Interactive lecture, brainstorming, dialogue and discussion, assignment and report

Interactive lecture, brainstorming, dialogue and discussion

He is charged with a duty in National Accounts Measurement - Expenditure Method - Income Method.

He is assigned the task of solving an exercise.

Evaluation method		Name of unit or topic	Referred learning outcomes	Weeks
short exams	theoretical Auditory methods Blackboard writing style Direct dialogue style practical Assignment of tasks; And report	Definition of macroeconomics and comparison with microeconomics - circular flow of production and income - objectives of studying macroeconomics.	The student should be able to know and understand definitions and concepts. Macroeconomics Explaining the difference between it and microeconomics and explaining the circular flow of production and income	2 weeks First week
short exams	theoretical Auditory methods Blackboard writing style Direct dialogue style practical Assignment of tasks; And report	National income and its accounts - the importance of studying national income and its accounts - gross national product - net national product - net national income - personal income - disposable or prepared incomeFor tunnels	The student should be able to recognize and understand changes in the level of national product. Gross and net domestic	2 weeks Second week
short exams	theoretical Auditory methods Blackboard writing style Direct dialogue style practical Assignment of tasks; And report	Methods of measuring national accounts - Expenditure method - Income method - Difficulties and changes in estimating national accounts - Monetary income and real income	The student should be able to: Statement on measuring national accounts, including the income method and methods of estimating them	2 weeks The third week
short exams	theoretical Auditory methods Blackboard writing style Direct dialogue style practical Assignment of tasks; And report	Standard numbers - Methods of constructing standard numbers - Value added method.	Explains to/or studentRecords A statement of the estimation of the composition of these numbers using the value-added method.	2 weeks Week 4

		Assignment of tasks And report		
short exams Duty discussions	theoretical  Auditory methods Blackboard writing style Direct dialogue style practical  Assignment of tasks;And report	Components of national product - consumption and its relationship to savings - the concept of consumption - consumption and the consumption curve - properties of the consumption function - the consumption function and the savings function.	The student should be able to:Knowing the components of the national product Explaining the concept of consumption and saving and the relationship between saving and consumption	2 theoretical 3 practical  Week 5
short exams Duty discussions	theoretical  Auditory methods Blackboard writing style Direct dialogue style practical  Assignment of tasks	Deriving the savings function from the consumption function - Factors affecting the consumption function - Change in the quantity consumed and change in consumption.	The student should be able to derive a function. Saving from the consumption function Statement factors affecting the consumption function	2 theoretical 3 practical  Week 6
short exams Duty discussions	theoretical  Auditory methods Blackboard writing style Direct dialogue style practical  Assignment of tasks;And report	Savings - Savings function (average propensity to save, direct propensity to save, and its relationship with the marginal propensity to consume and the average propensity to consume) - Factors affecting saving - The effect of increasing income on the consumption and saving functions	The student should be able to understand saving and its relationship with the marginal propensity to consume and the average propensity to consume. And explain factors affecting savings and effects in addition to the consumption and savings functions	2 theoretical 3 practical  Week 7

short exams Duty discussions	theoretical  Auditory methods Blackboard writing style Direct dialogue style practical  Assignment of tasksAnd report	'The effect of changes in factors affecting income on consumption and savings - the importance of saving and investment - the concept of investment - investment in inventory.	Student statement Able to understand the impact of changes in factors affecting income on consumption and savings	2 theoretical  Week 8  3 practical
short exams Duty discussions	theoretical  Auditory methods Blackboard writing style Direct dialogue style practical  Assignment of tasksAnd report	Construction and housing projects - fixed capital formation and the factors affecting it (market interest rate - marginal efficiency of investment) marginal efficiency of capital	Yto explain tol/or construction and housing projects students - fixed capital formation and the factors affecting it	2 theoretical  Week 9  3 practical
short exams Duty discussions	theoretical  Auditory methods Blackboard writing style Direct dialogue style practical  Assignment of tasks	Investment function - Investment curve - Factors affecting the investment demand curve - The impact of government measures on the level of investment - Equality of investment and savings - Elements of leakage and injection.	The student should be able to know and understand the investment function - the investment curve - the factors affecting the investment demand curve.	2 theoretical  Week 10  3 practical
short exams Duty discussions	theoretical  Auditory methods Blackboard writing style Direct dialogue style practical  Assignment of tasksAnd report	Determinants of national product (aggregate demand - aggregate supply) - aggregate demand - level of aggregate demand - aggregate demand function - characteristics of the aggregate demand curve -	'The student should be able to know the determinants of national product (aggregate demand.) Characteristics of the aggregate demand curve - Factors affecting aggregate demand	2 theoretical  Week 11  3 practical

		Factors affecting aggregate demand (shift of the aggregate demand curve)		
short exams Duty discussions	theoretical  Auditory methods Blackboard writing style Direct dialogue style practical  Assignment of tasks/And report	The effects of expansionary and contractionary fiscal policy on aggregate demand - the effect of expansionary monetary policy	Explain to the student the effects of expansionary and contractionary fiscal policy on aggregate demand	theoretical 3 practical 2  Twelfth week
short exams Duty discussions	theoretical  Auditory methods Blackboard writing style Direct dialogue style practical  Assignment of tasks/And report	Variables that are outside the control of the state's overall policy.	Student statement Variables that are outside the control of the state's overall policy.	theoretical 3 practical 2  thirteenth week
short exams Duty discussions	theoretical  Auditory methods Blackboard writing style Direct dialogue style practical  Assignment of tasks/And report	Aggregate supply - short-run aggregate supply curve - determinants of aggregate supply - classical aggregate supply curve.	The student should be able to know the determinants of national product (aggregate supply). short-run aggregate supply curve	theoretical 3 practical 2  Fourteenth week
short exams Duty discussions	theoretical  Auditory methods Blackboard direct dialogue method practical  Assignment of tasks/And report	The effect of fiscal policy on the classical aggregate supply curve - The effect of expansionary fiscal policy in the classical case - The effect	Explain to the student the effect of fiscal policy on the classical aggregate supply curve - The effect of expansionary fiscal policy in the classical case	theoretical 3 practical 2  Week 15

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Assignment of tasks. And report  
of expansionary monetary  
policy in the classical model.

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11- Course Evaluation				
Relative weight %	degree	Calendar appointment - week	Evaluation methods	
5	5	My theory week 1-15	Final theoretical report	1
10	5	Week 3	Short Test 1 Quiz	2
15	10 5	Week 9	Midterm exam Theoretical and practical	3
10	5 5	Week 12	Short Test 2Quiz	4
20	20	Practical exam week	Final practical exam	5
40	40	Theoretical exam week	Final theoretical exam	
100	100		the total	

12- Learning and teaching resources		
1- Macroeconomic Theory Dr. Saqr Ahmed Saqr, Kuwait Publications Agency - 1997	Required textbooks (methodology if any)	
2- Macro – Economic Theory and policy, G. Ackley, Macmillan company, New York, 1982		
3- W. Smith, Macroeconomics, Richard D. Irwin, 1978.  Dr. Abdul Salam Yassin Al-Idrisi, Macroeconomics, Basra University Press, Deposited in the National Library in Baghdad, 1986.	Main references (sources)	
1- Michael Ebdjman, Macroeconomics: Theory and Policy, translated and Arabized by Muhammad Ibrahim Mansour, Mars Publishing House, 1999. 2- Dr. Sami Khalil, Macroeconomic Theory, Kuwait, 1994.	Recommended supporting books and references (scientific journals, reports...)	
Iraqi Economists Network	Electronic references, websites	

Theoretical subject teacher: Dr. Sari Sael Abdul

Practical subject teacher: Eng. Rahhal Sobhi Qasim

**Head of the Scientific Committee: Prof. Dr. Alaa Mohammed Abdullah**

**Head of the Department of Agricultural Economics: Prof. Dr. Alaa Mohammed  
Abdullah**

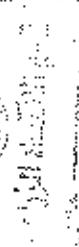
## Course Description Form

1. Course name	economic theoryCollege 2	
2. Course code Code:	MATH1390	
3. semester/year	the chapter(the second)thespringY/2024+2025	
4. Date this description was prepared	1/2/2025	
5. Available attendance forms:	My presence+electronic	
6. Number of study hours (total) / Number of units (total):	75/ 3.5	
7. Name of the course administrator (if more than one name is mentioned)		
Name: Dr. Sara Sael Abdul Mashal Email:sura84@uomosul.edu.iq Mr. Rahhal Sobhi Qasim Email:rihal.subhy@uomosul.edu.iq		
		8. Course objectives
practical:		theoretical
1- Enabling the student to understand and comprehend the factors and variables that achieve equilibrium in the economy.  2- Enabling the student to know the causes that lead to the occurrence of economic problems, then identifying ways to solve them and reduce their effects.  3- Providing the student with the necessary skills to understand macroeconomic policies and any type thereof in application to the economic situation of developing countries.		1-Enabling the student to identify the equilibrium states required to be reached in any economy  2-Enabling the student to knowUnderstanding economic problemsThe overall formula, its solutions and the resulting effects  3-Providing the student with skills to deal withMacroeconomic policies and problemsWhich one?moreImpact on the actual economic reality.

10 Course structure					
Evaluation method	Learning method	Name of unit or topic	Required learning outcomes	watch CS	week
short exams Duty discussions	<b>theoretical</b> Auditory methods Blackboard writing style Direct dialogic style practical Assignment of tasksAnd report	Determining equilibrium levels of production, income, and employment – conditions for achieving the desired balanceUsing tables and Charts - Planned Savings - Planned Investment, Actual Savings, and Actual Investment	A1 The student should be able to:knowledge understanding to setBalance levels B1conditionsbalance WithUSC tables and charts	2 theoretical 3 practical	First week
short exams Duty discussions	<b>theoretical</b> Auditory methods Blackboard writing style Direct dialogic style practical Assignment of tasksAnd report	Changes in the level of net national product and the concept of the multiplier - multiplier - multiplier coefficient - methods of calculating the multiplier	C1 The student should be able to know C2Understanding changes in the level of national income	2 theoretical 3 practical	Second week
short exams Duty discussions	<b>theoretical</b> Auditory methods Blackboard writing style Direct dialogic style practical Assignment of tasksAnd report	Some modifications onReservationsOn the multiplier - Properties of the multiplier - Importance of the idea of the multiplier	B2 The student should be able to know C3Understand the importance and properties of the multiplier	2 theoretical 3 practical	The third week
short exams Duty discussions	<b>theoretical</b> Auditory methods Blackboard writing style Direct dialogic style practical Assignment of tasksAnd report	The dilemma or declining savings, the inflationary gap and the deflationary gap - the accelerator principle - the	B3 The student should be able to knowUnderstanding the dilemma of savings and accelerator	2 theoretical 3 practical	Week 4

	Assignment of tasksAnd report	overlap and interaction between the multiplier and the accelerator	practical
short exams Duty discussions	theoretical  Auditory methods Blackboard writing style Direct dialogue style practical  Assignment of tasksAnd report	Money and Banking - Concept of Money - Functions of Money - Money Supply - Simple Money Multiplier - Expanded Money Multiplier - Demand for Money	2 theoretical 3 practical  Week 5
short exams Duty discussions	theoretical  Auditory methods Blackboard writing style Direct dialogue style practical  Assignment of tasks	Banks - The Central Bank and its Functions - Commercial Banks	2 theoretical 3 practical  Week 6
short exams Duty discussions	theoretical  Auditory methods Blackboard writing style Direct dialogue style practical  Assignment of tasksAnd report	Economic policies - Objectives of economic policies - Fiscal policies - Public revenues and public expenditures - Fiscal policy tools - Effects of public expenditures	2 theoretical 3 practical  Week 7
short exams Duty discussions	theoretical  Auditory methods Blackboard writing style Direct dialogue style practical  Assignment of tasksAnd report	Monetary policies - Monetary policy tools - Determinants of maintaining fiscal policy in the country	2 theoretical 3 practical  Week 8

short exams Duty discussions	theoretical  Auditory methods Blackboard writing style Direct dialogue style practical  Assignment of tasks And report	Macroeconomic problems - Inflation - Estimating inflation - Indices - Types of inflation - Causes of inflation	C4 The student should be able to know Understanding economic problems, including inflation, causes and types	2 theoret ical 3 practic al  Week 9
short exams Duty discussions	theoretical  Auditory methods Blackboard writing style Direct dialogue style practical  Assignment of tasks	Effects of inflation (impact of inflation on economic activity - measures to address inflation - monetary policy and fiscal policy)	B7 The student should be able to know Understanding the impact and treatment of inflation	2 theoret ical 3 practic al  Week 10
short exams Duty discussions	theoretical  Auditory methods Blackboard writing style Direct dialogue style practical  Assignment of tasks And report	Unemployment - The concept of unemployment - Calculating the unemployment rate - Types of unemployment - The relationship between inflation and unemployment (Phelps grant) - The economic and social effects of unemployment - Means of treating unemployment	B8 The student should be able to know Understanding unemployment, how to calculate it, its types, and ways to treat it	2 theoret ical 3 practic al  Week 11
short exams Duty discussions	theoretical  Auditory methods Blackboard writing style Direct dialogue style practical	Business cycles, unemployment, and inflation - Business cycles - Phases of the business cycle: the period of prosperity and prosperity	B9 The student should be able to know And understand Business Cycles, Unemployment, and Inflation - Business Cycles	2 theoret ical 3 practic al  Twelfth week



		Assignment of tasksAnd report			
short exams Duty discussions	theoretical  Auditory methods Blackboard writing style Direct dialogue style practical  Assignment of tasksAnd report	The idea of recession and prosperity - The idea of recession and decline - The period of depression - The period of the economy - Sustainable industries - Theories business cycle	C5 The student should be able to know And understand Stages and theories of the business cycle	2 theoret ical 3 practic al	thirteenth week
short exams Duty discussions	theoretical  Auditory methods Blackboard writing style Direct dialogue style practical  Assignment of tasksAnd report	Balance of Payments - Balance of Payments - Imbalance and Means of Correcting It	B10 The student should be able to know and understand Balance of payments	2 theoret ical 3 practic al	Fourteenth week
short exams Duty discussions	theoretical  Auditory methods writing style Blackboard direct dialogue method practical  Assignment of tasksAnd report	Economic growth- Manifestations Economic backwardness and its factors - Theories of economic growth -theory Modern growth model Harrod-Domar	B11 The student should be able to understand economic growth, Economic backwardness and theories of economic growth	2 theoret ical 3 practic al	Week 15



### II- Course Evaluation

Relative weight %	degree	Calendar appointment - week	Evaluation methods	
5	5	My theory week 1-15	Final theoretical report	1
10	5 5	Week 3	Short Test 1 Quiz	2
15	10 5	Week 9	Midterm exam Theoretical and practical	3
10	5 5	Week 12	Short Test 2 Quiz	4
20	20	Practical exam week	Final practical exam	5
40	40	Theoretical exam week	Final theoretical exam	
100	100		the total	

### I2- Learning and teaching resources

1- Macroeconomic Theory Dr. Saqr Ahmed Saqr, Kuwait Publications Agency - 1997	Required textbooks (methodology if any)
2- Macro – Economic Theory and policy, G. Ackley, Macmillan company, New York, 1982	
3- W. Smith, Macroeconomics, Richard D. Irwin.1978.  Dr. Abdul Salam Yassin Al-Idrisi, Macroeconomics, Basra University Press, Deposited in the National Library in Baghdad, 1986.	Main references (sources)
1- Michael Ebdjman, Macroeconomics: Theory and Policy, translated and Arabized by Muhammad Ibrahim Mansour, Mars Publishing House, 1999. 2- Dr.Sami Khalil, Macroeconomic Theory, Kuwait, 1994.	Recommended supporting books and references (scientific journals, reports...)
Iraqi Economists Network	Electronic references, websites

Theoretical subject teacher: Dr. Sari Sael Abdul

Practical subject teacher: Eng. Rahhal Sobhi Qasim



**Head of the Scientific Committee: Prof. Dr. Qais Nazem Ghazal**

**Head of the Department of Agricultural Economics: Zwaïd Echti Abdel**



## Course Description

<b>1. Course Name:</b>	English Language3
<b>2. Course Code:</b>	ENGL300
<b>3. Semester / Year:</b>	2024/2025
<b>4. Description Preparation Date:</b>	01/09/2024
<b>5. Available Attendance Forms:</b>	Presence, online
<b>6. Number of Credit Hours (Total) / Number of Units (Total):</b>	30 Hours 2 Unit

<b>7. Course administrator's name (mention all, if more than one name)</b>
Name: Raghad Ismaeel Saeed
Email: raghad.alnuaimy@uomosul.edu.iq

<b>8. Course Objectives</b>
<p><b>Course Objectives</b></p> <ul style="list-style-type: none"> <li>• To going on studying the English language In special the scientific language</li> <li>• Widening student mind about scientific and literature English vocabularies</li> <li>• Helping the students to think and write in English</li> </ul>

<b>9. Teaching and Learning Strategies</b>
Strategy Making use of the electronic available methods alike auditory or the visual in addition to the white board

<b>10. Course Structure</b>					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2hours Presence	(A) The student should be able to know the basics of the English language	Kinds of sentences.	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz
2	2hours Presence	(A) The student should be able to know the tenses of the English language	English tenses/ introduction	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz
3	2hours	( A) The student should	Simple	Electronic lectures,	Exams

	Presence	be able to know the rules of the English language	tense/ with diagrams.	videos, posters and other methods related to learning	Reports Discussions quiz
4	2hours online	( A )The student should be able to know the basics of the English language	Progressive tense/with diagrams.	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz
5	2hours Presence	(A)The student should be able to know the basics of the English language	Perfect tense./ with diagrams.	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz
6	2hours Presence	(A)The student should be able to know the basics of the English language	Perfect progressive tense/with diagrams.	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz
7	2hours online	(A) The student should be able to know the basics of the English language	verb to be	Electronic lectures, videos, posters and other methods related to learning	Exams – Reports Discussions quiz
8	2hours Presence	(A) The student should be able to know the basics of the English language	Parts of English nouns.	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz
9	2hours Presence	(A)The student should be able to know the basics of the English language	Active and passive voice in English.	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz
10	2hours Presence	(A)The student should be able to know the basics of the English language	The scientific subject ( preparatory reading ).	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz
11	2hours Presence	(A)The student should be able to know the basics of the English language	Re-reading for more comprehension	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz
12	2hours Presence	(A)The student should be able to know the basics of the English language	Studying the scientific terms.	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz
13	2hours Presence	(A)The student should be able to know the basics of the English language	Studying The scientific terms.	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz
14	2hours	(A)The student should	Studying	Electronic lectures,	Exams

	online	be able to know the basics of the English language	the scientific terms.	videos, posters and other methods related to learning	Reports Discussions quiz
15	2hours Presence	(B)The student should be able to know the basics of the English language	Translation into Arabic.	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz

### 1. Course Evaluation

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

No.	Evaluation Methods	Evaluation Date (Week)	Marks	Relative Weight (%)
1	Quiz (1)	Week 4	Theoretical (5)	5
2	Monthly Exam (1)	Week 6	Theoretical (15)	15
3	Quiz (2)	Week 8	Theoretical (5)	5
4	Monthly Exam (2)	Week 13	Theoretical (15)	15
5	Quest rate.	Seasonal rates are announced at the end of the semester.	Theoretical: (40)	40
6	Final Theoretical Test.	The Week Of Theoretical Exams.	60	60
Total			100	100

### 2. Learning and Teaching Resources

Required textbooks (curricular books, if any)

Main references (sources) Rapid Review of English Grammar 1957

Recommended books and references  
(scientific Journals, reports...) New Headway - English course  
English in agriculture 1985  
oxford bookworms

Electronic References, Websites

<https://translate.yandex.com/>  
<https://ar.younglish.com/>  
<https://readlang.com/>  
[www.reverso.net](http://www.reverso.net)  
<https://clevenlabs.io/app/home>  
[/The Library Genesis](http://The Library Genesis)  
[junkbooks / cole13 / pdfdrive](http://junkbooks / cole13 / pdfdrive)

  
A.L. Raghad Ismaeel Saeed

  
Head Of Department

  
Chairperson of the Scientific Committee

## Course Description Form Computer applications4

1. Course Name:

Computer applications4

2. Course Code:

COMA401

3. Semester / Year:

First semester/ 2024-2025

4. Description Preparation Date:

1/9/2024

5. Available Attendance Forms:

In presence

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

3 practical hours/1.5 units

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

Name: Najla Matti Isaac

Email: najla.matti@uomosul.edu.iq

8. Course Objectives

Course Objectives

- Enable the student to become familiar with the SAS statistical program and its applications in agricultural experiments.
- Enable the student to know and understand programs in the SAS language and apply the steps and procedures followed to use the SAS statistical program in analyzes of agricultural experiments.
- Enabling the student to write programs in the SAS language for various agricultural and scientific experiments.
- Providing the student with the skills of dealing with data types when writing programs in the SAS language.
- Enabling the student to correct grammatical and linguistic errors that appear when implementing programs written in the SAS language
- Enable the student to read, understand and interpret the results and outputs of implementing programs written in SAS.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<ul style="list-style-type: none"> <li>- Interactive lecture</li> <li>- Brainstorming</li> <li>- Dialogue and discussion</li> <li>- Field Training</li> <li>- Practical exercises</li> <li>- Field project</li> <li>- Self-education</li> </ul>
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## 10. Course Structure

<b>Week</b>	<b>Hours</b>	<b>Required Learning Outcomes</b>	<b>Unit or subject name</b>	<b>Learning method</b>	<b>Evaluation method</b>
1	3 practical	I: The student learns about the SAS program and its importance in analyzing reactive analytics and the fraudulent tools in it.	What is the SAS program - storing and retrieving information - modifying and programming data - writing reports - statistical analysis - processing records	Interactive lecture, brainstorming, dialogue and discussion, practical exercises, and self-learning.	Final test.
2	3 practical	a2: The student is familiar with the windows of the SAS program. The information from each window, and how to deal with them, and is familiar with the general matters that people who want to use the SAS program must have in order to use statistical analyses.	SAS windows - writing and loading the program window - program execution steps window - results window. Who uses SAS software? Why SAS. General matters that people who want to use SAS software for the purpose of statistical analysis should have in mind.	Interactive lecture, brainstorming, dialogue and discussion, practical exercises, and self-learning.	Report, Final test.
3	3 practical	c1: shows the negative trace of SAS.	General steps for writing a SAS program.	Interactive lecture, brainstorming, dialogue and discussion, practical exercises, and self-learning.	Homework1, Final test.
4	3 practical	c2: The student employs functions, their importance, and usage formulas in writing a program in the SAS language	Functions	Interactive lecture, brainstorming, dialogue and discussion, practical exercises, and self-learning.	Quiz1, Final test.
5	3 practical	D1: The student applies the creation of new data from the input data set using mathematical operations or functions and formulas used in writing a program in the SAS language.	Create new data from an input data set using mathematical operations or functions.	Interactive lecture, brainstorming, dialogue and discussion, practical exercises, and self-learning.	Homework2, Final test.

6	3 practical	d2: The student tests creating data using the IF statement and the formulas used in writing a program in the SAS language	- Generate data using IF conditional statements. + scientific visit.	Interactive lecture, brainstorming, dialogue and discussion, practical exercises, and self-learning.	scientific visit, Final test.
7	3 practical	sd3 The student implements the use of Portuguese sentences to delete data from a data set and the usage formulas in writing a program in the SAS language	- Using conditional statements to delete data from the data set in the program + Semester exam 1	Interactive lecture, brainstorming, dialogue and discussion, practical exercises, and self-learning.	semester test1, Final test.
8	3 practical	b1: The child sorts and arranges data and formulas used in writing a program in the SAS language	- Sorting and arranging data Use the PROC SORT statement	Interactive lecture, brainstorming, dialogue and discussion, practical exercises, and self-learning.	practical test1, Final test.
9	3 practical	b2: The artist uses the iterative profit plan tool with only one orthogonal syntax and their formula in writing an integrated SAS program.	- Applications in descriptive statistics - One-way frequency distribution table - Two-way frequency distribution table PROC FREQ	Interactive lecture, brainstorming, dialogue and discussion, practical exercises, and self-learning.	Homework3, Final test.
10	3 practical	b3: The student produces cooperation and association standards by using their formulas in writing a program in the SAS language	-Measures of mediation and measures of dispersion. PROC MEANS	Interactive lecture, brainstorming, dialogue and discussion, practical exercises, and self-learning.	Quiz2, Final test.
11	3 practical	b4: The student tries out the T-test response and the formula used in writing a program in the SAS language	- Test of means and analysis of variance - t-test	Interactive lecture, brainstorming, dialogue and discussion, practical exercises, and self-learning.	Homework, Final test.
12	3 practical	b5: The student evaluates the balanced analysis of variance plot and the formula used in writing a program in the SAS language	- Analysis of variance formula PROC ANOVA-	Interactive lecture, brainstorming, dialogue and discussion, practical exercises, and self-learning.	practical test2, Final test.
13	3 practical	b6: The student experiments with the unbalanced analysis of variance and the formulas used in writing a program in the SAS language	PROC GLM + Semester exam 2	Interactive lecture, brainstorming, dialogue and discussion, practical exercises, and self-learning.	semester test2, Final test.
14	3 practical	b7 The student defines the contract and syntax used in writing a Bulgarian SAS	PROC CORR correlation coefficient formula	Interactive lecture, brainstorming, dialogue and discussion, practical	Homework, Final test.

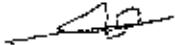
		program		exercises, and self-learning.
15	3 practical	:b8 The student does not rule out the regression equation and the formulas used in writing the Bulgaria SAS program	PROC REG REGRESSION FORMULA	Interactive lecture, brainstorming, dialogue and discussion, practical exercises, and self-learning.

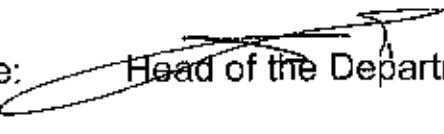
## 11. Course Evaluation

t	Evaluation methods	Evaluation date (one week)	Grade	Relative weight %
1	Report 1	second week	2	2%
2	Homework 1	the third week	1	1%
3	Short test Quiz1	fourth week	2	2%
4	Homework2	The fifth week	1	1%
5	Scientific visit	the sixth week	1.5	1.5%
6	Semester test1	Seventh week	10	10%
7	Practical test1	The eighth week	2.5	2.5%
8	Homework3	Week nine	1	1%
9	Short test Quiz2	The tenth week	2	2%
10	Homework4	Week eleven	1	1%
11	Practical test2	The twelfth week	2.5	2.5%
12	Semester test2	The thirteenth week	10	10%
13	Homework5	The fourteenth week	1	1%
14	Practical test3	The fifteenth week	2.5	2.5%
15	Final practical test	Final semester exams	60	60%
	The total		100	100%

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	A curriculum was prepared by computer professors at the college based on the SAS software guide.
Main references (sources)	<ul style="list-style-type: none"> <li>- SAS software guide</li> <li>- A Handbook of Statistical Analyses using SAS. (authors: Geoff Der and Brian S. Everitt)</li> <li>- Data analysis using the SAS statistical program, written by Dr. Firas Rashad Al-Samarrai</li> </ul>
Recommended books and references (scientific journals, reports...)	Statistical analysis using the SAS package, prepared by Abdullah Al-Shahrani
Electronic References, Websites	<ul style="list-style-type: none"> <li><a href="https://www.sas.com/en_sg/training/offers/free-training.html">https://www.sas.com/en_sg/training/offers/free-training.html</a></li> <li><a href="https://video.sas.com/detail/videos/how-to-tutorials">https://video.sas.com/detail/videos/how-to-tutorials</a></li> <li><a href="https://www.udemy.com/course/sas-programming-for-beginners/">https://www.udemy.com/course/sas-programming-for-beginners/</a></li> <li><a href="https://sascrunch.com/courses/sas-base-programming-for-absolute-beginners-free-version/">https://sascrunch.com/courses/sas-base-programming-for-absolute-beginners-free-version/</a></li> </ul>

  
subject teacher: Najla Matti Isaac

   
Chairman of the Scientific Committee: Head of the Department:



## Course Description Form

<b>1. Course Name:</b> English Language 4					
<b>2. Course Code:</b> ENGL 400					
<b>3. Semester / Year:</b> 2024/2025					
<b>4. Description Preparation Date:</b> 01/02/2025					
<b>5. Available Attendance Forms:</b> Presence + Online live meeting and Google classroom					
<b>6. Number of Credit Hours (Total) / Number of Units (Total):</b> 30 Hours 2 Unit					
<b>7. Course administrator's name (mention all if more than one name):</b> Name: Omar AbdulHameed Al-Kurjia Email : omarkj @uemosul.edu.iq					
<b>8. Course Objectives:</b>					
Course Objectives			<ul style="list-style-type: none"> <li>• To going on studying the English language in special and scientific language</li> <li>• Widening student mind about scientific and literature English vocabularies</li> <li>• Helping the students to think and write In English</li> </ul>		
<b>9. Teaching and Learning Strategies:</b>					
Strategy		Making use of the electronic available methods a like auditory or visual in addition to the white board plus google classroom			
<b>10. Course Structure:</b>					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2hours Presence	(A)The student should be able to know the basics of the English language	Practicing English with " No Place like Home" -- Reading out clearly and learning pronunciation + Vocabulary	Electronic lectures, videos, posters and other methods related to learning	Exams Reports Discussions quiz
2	2hours	(A)The student should	Expat Tales: Jan	Electronic lectures,	Exams -



	Presence	be able to know the tenses of the English language	Walker in Chile: Spoken English informal Reading out, Listening, speaking, everyday English	videos, posters and other methods related to learning	Reports Discussions - quiz
3	2hours Presence	(A)The student should be able to know the rules of the English language	Expat Tales 2 : Thomas Creed in Korea: Language – conversation with students	Electronic lectures, videos, posters and other methods related to learning	Exams - Reports Discussions - quiz
4	2hours Presence	(A)The student should be able to know the basics of the English language	Practicing English with " The Blind Assassin" + Reading out clearly and learning pronunciation + Vocabulary	Electronic lectures, videos, posters and other methods related to learning	Exams - Reports Discussions - quiz
5	2hours Presence	(A)The student should be able to know the basics of the English language	Starting with " Sheep" Dealing with English in Agriculture within different specialties (reading and pronunciation)	Electronic lectures, videos, posters and other methods related to learning	Exams - Reports Discussions - quiz
6	2hours Presence	(A)The student should be able to know the basics of the English language	Language Focus Part 1 English in Agriculture 2 : Homemade butter	Electronic lectures, videos, posters and other methods related to learning	Exams - Reports Discussions - quiz
7	2hours Presence	(A)The student should be able to know the basics of the English language	Conspiracy Theory 1 : The Death of Diana Reading out, Listening, speaking,	Electronic lectures, videos, posters and other methods related to learning	Exams - Reports Discussions - quiz
8	2hours Presence	(A)The student should be able to know the basics of the English language	Two Famous Brands : Starbucks Coffee Reading out, Listening, speaking, everyday English	Electronic lectures, videos, posters and other methods related to learning	Exams - Reports Discussions - quiz
9	2hours Presence	(A)The student should be able to know the basics of the English language	Conspiracy Theory 2 : The Apollo Moon Landings , Reading out, Listening, speaking	Electronic lectures, videos, posters and other methods related to learning	Exams - Reports Discussions - quiz

10	2hours Presence	(A)The student should be able to know the basics of the English language	Conspiracy Theory 3 : The death of JFK , Reading out, Listening, speaking, everyday English	Electronic lectures, videos, posters and other methods related to learning	Exams - Reports Discussions - quiz
11	2hours Presence	(A)The student should be able to know the basics of the English language	Apple Macintosh Progressive interaction with students- feedback+	Electronic lectures, videos, posters and other methods related to learning	Exams - Reports Discussions - quiz
12	2hours Presence	(A)The student should be able to know the basics of the English language	The Kippers" Read, Digest and Analyze"	Electronic lectures, videos, posters and other methods related to learning	Exams - Reports Discussions - quiz
13	2hours Presence	(A)The student should be able to know the basics of the English language	The Coldest & Earliest places on Earth Reading out Translation to Arabic , learning pronunciation	Electronic lectures, videos, posters and other methods related to learning	Exams - Reports Discussions - quiz
14	2hours Presence	(A)The student should be able to know the basics of the English language	F.R.I.E.N.D.S Past .Reading out , Translation to Arabic , learning pronunciation	Electronic lectures, videos, posters and other methods related to learning	Exams - Reports Discussions - quiz
15	2hours Presence	(A)The student should be able to know the basics of the English language	Jamie Oliver (The Worlds Greatest Chef ) interaction with students+ feedback+	Electronic lectures, videos, posters and other methods related to learning	Exams - Reports Discussions - quiz

## II. Course Evaluation

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

No.	Evaluation Methods	Evaluation Date (Week)	Marks	Relative Weight (%)
1	Quiz (1)	Week 4	Theoretical (5)	5
2	Monthly Exam (1)	Week 6	Theoretical (15)	15
3	Quiz (2)	Week 8	Theoretical (5)	5
4	Monthly Exam (2)	Week 13	Theoretical (15)	15
5	Quest rate.	Seasonal rates are announced at the end of the semester.	Theoretical: (40)	40
6	Final Theoretical Test.	The Week Of Theoretical Exams.	60	60
Total			100	100

## III. Learning and Teaching Resources

Required textbooks (curricular books, if any)

Main references (sources)

New Headway - English course  
Upper Intermediate 2020

Recommended books and references (scientific journals, reports...)	New Headway - English course Upper Intermediate 2020
Electronic References, Websites	<ul style="list-style-type: none"> <li>• <b>British Council – Upper-Intermediate (B2)</b>  <a href="https://learnenglish.britishcouncil.org/general-english/upper-intermediate-b2">https://learnenglish.britishcouncil.org/general-english/upper-intermediate-b2</a>            (Grammar, vocabulary, listening, and reading exercises)</li> <li>• <b>Perfect English Grammar</b>  <a href="https://www.perfect-english-grammar.com">https://www.perfect-english-grammar.com</a>            (Detailed grammar explanations and exercises)</li> </ul>



A.L. Omar AbdulHameed Al-Kurjia

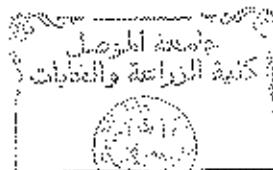


Head of Department



Chairperson of the Scientific Committee

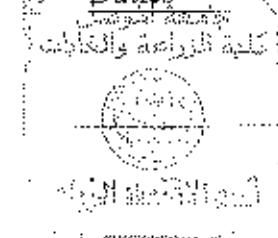
Dr. Kays Nathim Ghazal



## Course description form

Course Name .1
Agricultural planning
Course Code .2
AGUR494
Semester/Year: Annual .3
2024-2025 Second semester (spring)
Date this description was prepared .4
2025/2/1
Available forms of attendance .5
In person and electronically
(Number of study hours (total)) number of units (total) .6
( 3 ) Number of units/ ( 45 ) Number of hours
(Name of the course administrator (if more than one name is mentioned) .7
Allaf-Dr. Ramia Amer Khalil Al :Lecturer
Course objectives .8
. to the concept and role of agricultural planning Introducing the student -1 Preparing agricultural cadres capable of familiarizing themselves with the -2 of preparing agricultural plans means development -self The skill of conducting field application for the purpose of - 3 and personal development, and the skill of using educational methods which the department + the economy Qualifying them to advance the reality of -4 preparing scientific research and economic plans is interested in addressing in
and learning strategies Teaching .9
Transferable general and qualifying skills (other skills related to -1 (employability and personal development
Training the student on how to use information sources to -2 . maintain and develop his basic information
Developing the student's method of transferring information to the -3 . work environment
Training the student to conduct scientific research to solve problems at -4 . work and develop methods
Course structure .10

Evaluation method	Teaching method	the Name of unit/topic	Required learning outcomes	hours	the week
Daily exams Duties	person -In lectures	The concept, origin and types of planning	The student c1,b1,a1 should be able to recognize the concept and principles of planning	3	1
Daily exams Duties	person -In lectures	The basic elements of the research plan	The student a2,c2,b2 should be able to know the and understand methods and elements of scientific research	3	2
Daily exams Duties	person -In lectures	Components elements and obstacles of planning	The student a3, c3, b3 should be able to know the and understand tools of elements and economic planning	3	3
Daily exams Duties	person -In lectures	Technical and economic methods	The student a4, b4, c4 should be able to know planning methods and systems	3	4
Daily exams Duties	person -In lectures	System of goals and previous growth rates	The student A5, b5, c5 should be able to know and understand agricultural economic planning systems	3	5
Semester exam	Semester exam	The prediction system, its stages and fields	The student A6, b6, c6 should be able to know planning other forms of systems	3	6
Daily exams Duties	person -In lectures	Comprehensive software system and its contents	The student A7, b7, c7 should be able to know of planning types other systems	3	7
Daily exams Duties	person -In lectures	Material, monetary and labor balances	The student A8, b8, c8 should be able to know and understand parallel economic	3	8
Daily exams Duties	person -In lectures	Parallels of foreign trade and economic	The student A9, b9, c9 should be able to know and understand	3	9



		interconnection	planning tools		
Daily exams Duties	person -In lectures	output model - and its aspects	The A10, b10, c10 student should be able to know and understand the input form	3	10
Daily exams Duties	person -In lectures	The concept of linear programming, its assumptions, and restrictions on productive activities	The A11, b11, c11 student should be able to know the linear programming model	3	11
Daily exams Duties	person -In lectures	Concepts of standards, indicators, duties to achieve the system and its principles	The student A12, c12 should be able to know the and understand standards and indicators	3	12
Daily exams Duties	person -In lectures	Labor standard, land resource, farm income, agricultural productivity	The student a13,c13 familiar with should be standards of the the agricultural sector	3	13
Daily exams Duties	person -In lectures	Work productivity planning, mechanization planning Economic efficiency	The a14,b13,c14 student should be able to know and understand agricultural planning	3	14
Daily exam	person -In lectures	Distribution of investment, selection of agricultural projects	A15, b14, c15 Agricultural investment planning and application of experiments	3	15

#### Course evaluation 11

Attendance 5%

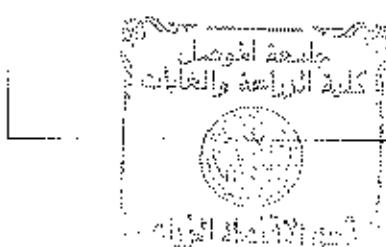
%5 (Quiz ) Short tests

First semester exam 15%

Second semester exam 15%

Pursuit score 40%

Final exam 60%



Final grade 100%

**Learning and teaching resources: 12**

nebi-planning and development Dr. Imran Al Agricultural Wafa-Agricultural economics book Dr. Issam Abu Al Arif-Dr. Jawad Saad Al book	(Required textbooks (methodology, if any (Main references (sources Recommended supporting books and ....references (scientific journals, reports
<a href="http://www.noor-book.com">www.noor-book.com</a>	Internet sites (Electronic references)

Subject teacher: M.D. Raima Amer Khatib

**Head of the Agricultural Economics Department**

Dr. Zaid Pathi Abd



**Chairman of the Scientific Committee**

Prof.d. Qais Nazeem Ghazal

### Course Description: Fourth Stage

1- Course name:	Evaluation of Agricultural Projects
2- Course code:	AGPE493
3- Semester/Year:	-Second semester - academic year 2024 - 2025
4- Date this description was prepared:	1 - 2 - 2025
5- Available forms of attendance:	In-person + online
6- Number of study hours (total) / Number of units (total):	75 hours/semester - 5 hours per week
7- Name of course supervisor (if more than one name is provided):	Name: Asst. Prof. Dr. Iman Younis Mahmoud Email: <a href="mailto:iman.younis75@uomosul.edu.iq">iman.younis75@uomosul.edu.iq</a> Email: <a href="mailto:iman.faisal@uomosul.edu.iq">iman.faisal@uomosul.edu.iq</a>
8- Course objectives:	<ol style="list-style-type: none"><li>1- Understanding the areas of benefit from modern standards in economic applications.</li><li>2- -Forming a general understanding of modern applications in the field of agricultural economics.</li><li>3- -Identifying the latest developments in the standards used to evaluate project performance efficiency.</li></ol>
2- Teaching and learning strategies:	

JO Course structure					
Evaluation Method	Learning Method	Unit or Topic Name	Referred Learning Outcomes	Hours	Week
quiz Homework assignment Discussions	Auditory Methods Blackboard Writing Method Direct Dialogue Method	The concept of economic performance efficiency Definition of performance efficiency assessment	-	2-	theoretical
quiz Homework assignment Discussions	-auditory Methods Blackboard Writing Method Direct Dialogue Method Assignment to Prepare a Study to Evaluate the Performance of an Agricultural Project	The concept of - economic performance evaluation The importance of - economic performance evaluation and its reasons	- - - -	1 practical 3	
quiz Homework assignment Discussions	Auditory Methods Blackboard Writing Method Direct Dialogue Method	Evaluating the performance efficiency of economic projects	-	2-	theoretical
quiz Homework assignment Discussions	Auditory Methods Writing on the Board Direct Dialogue Method Assigning Tasks	Performance Efficiency - Evaluation Levels Performance Efficiency - Evaluation Functions Key Dimensions of - Performance Evaluation	- - - -	2 practical 3	
quiz Homework assignment Discussions	Auditory Methods Blackboard Writing Method Direct Dialogue Method	Performance Efficiency Measurement Standards in Economic Projects Production Capacity Standard Production Capacity Levels	- - -	2-	theoretical
quiz Homework assignment Discussions	Auditory Methods Writing on the Board Direct Dialogue Method Solving Examples Assigning Tasks	Concept Theoretical production capacity Actual production capacity Solving examples	- - - -	3-	practical
quiz Homework assignment Discussions	Auditory Methods Writing on the Board Direct Dialogue Method	Concept Maximum Production - Capacity Available Production - Capacity	- - -	2-	theoretical

quiz Homework assignment Discussions	Auditory Methods Writing on the Board Direct Dialogue Method Solving Examples Assigning Tasks	Applying maximum and available energy standards to economic projects Solving examples -		3-practical
quiz Homework assignment Discussions	Auditory Methods Writing on the Board Direct Dialogue Method	Concept Design Production Capacity - Planned Production - Capacity		2-theoretical
quiz Homework assignment Discussions	Writing on the Board Direct Dialogue Method Solving Examples Assigning Tasks Auditory Methods	Applying design and planned energy standards to economic projects Solving examples -		3-practical
quiz Homework assignment Discussions	Auditory Methods Writing on the Board Direct Dialogue Method	Productivity Standard Productivity Concepts - Types of Productivity -		2-theoretical
quiz Homework assignment Discussions	Auditory Methods Writing on the Board Direct Dialogue Method Solving Examples Assigning Tasks	Methods of measuring productivity Productivity measures - Material productivity - Machine productivity - Capital productivity - Land productivity - Solving examples -		3-practical
quiz Homework assignment Discussions	Auditory Methods Writing on the Board Direct Dialogue Method	labor productivity The concept of labor productivity		2-theoretical
quiz Homework assignment Discussions	Auditory Methods Writing on the Board Direct Dialogue Method Solving Examples Assigning Tasks	Methods of Measuring Labor Productivity The Sample Method - The Transfer or Equivalent Method Solving Examples -		3-practical
		<b>First month exam</b> <b>Theoretical</b>		2-theoretical

		<b>First month exam</b>  <b>Practical</b>		-3 practical	
quiz Homework assignment Discussions	Auditory Methods  Blackboard Writing Method  Direct Dialogue Method	Determine the impact of different factors on the level of labor productivity		2- theoretical	9
quiz Homework assignment Discussions	Auditory Methods  Writing on the Board Direct Dialogue Method  In Solving Exercises	Solve exercises on the impact of factors on the level of work productivity		3- practical	
quiz Homework assignment Discussions	Auditory Methods  Blackboard Writing Method  Direct Dialogue Method	Value Added Standard  Value Added Concept		2- theoretical	10
quiz Homework assignment Discussions	Auditory Methods  Writing on the Board Direct Dialogue Method  Assigning Tasks	Applying the value-added standard to economic projects  Solving examples -		Practical 3-	
quiz Homework assignment Discussions	Auditory Methods  Writing on the Board Direct Dialogue Method  Assigning Tasks	Value Analysis Standard  Value Concept		2- theoretical	11
quiz Homework assignment Discussions	Auditory Methods  Writing on the Board Direct Dialogue Method  Assigning Tasks	Value Analysis  Indirect Costs - Direct Costs - Overhead Costs -  Solving Examples -		3- practical	
quiz Homework assignment Discussions	Auditory Methods  Writing on the Board Direct Dialogue Method	Return on Invested Capital (ROI) Standard  Factors Affecting - Invested Capital		2- theoretical	
quiz Homework assignment Discussions	Auditory Methods  Writing on the Board Direct Dialogue Method  Assigning Tasks	Solve examples to - measure the rate of invested capital		3- practical	12

quiz Homework assignment Discussions	Auditory Methods  Writing on the Board Direct Dialogue Method	Indicators for evaluating the production efficiency of the main production elements	-	2- theoretical	13
quiz Homework assignment Discussions	Auditory Methods  Writing on the Board Direct Dialogue Method	Solving examples to evaluate the production efficiency of production elements	-	3- practical	
quiz Homework assignment Discussions	Auditory Methods  Blackboard Writing Method Direct Dialogue Method Assignment to Prepare a Feasibility Study		Case studies	2- theoretical	14
quiz Homework assignment Discussions	Auditory Methods  Writing on the Board Direct Dialogue Method	Practical case study to evaluate the project's performance efficiency	-	3- practical	
		<b>Second month theoretical exam</b>	-	2- theoretical	15
		<b>Second Month Exam Practical</b>	-	3- practical	

Learning and teaching resources		Main references
Economic feasibility studies and project evaluation	websites	Electronic references
<u>Performance efficiency study of investment project</u>		

**12-Course Evaluation**

Relative Weight %	degree	Calendar appointment - week	Evaluation methods	n
5.2	5.2	week 1	Report 1	1
5.2	5.2	Week 4	Quiz 1	2
10	10	Week 8	Monthly Theoretical and Practical Test	3
5.2	5.2	Week 9	Quiz 2	4
5.2	5.2	Week 11	Quiz 3	5
10	10	Week 12	Discussion of Studies	6
10	10	Week 14	Monthly Theoretical Test	7
60	60	Week 15	Final Exam	8
100	100		Total	

مدرس المادة العملية

م.م. ايمن فيصل محمد

مدرس المادة النظرية

أ.م.د. ايمن يونس محمود

رئيس قسم الاقتصاد الزراعي  
أ.م.د. زيد فتحي عباس

رئيس اللجنة العلمية  
أ.د. قيس ناظم غزال



## Course Description Form

Course name:	1
Price analysis	
Course code:	2
PRAN496	
Semester Year:	3
Second semester	
Date this description was prepared:	4
	1/2/2025
Available attendance forms:	5

My presence+electronic

Number of study hours (total) = Number of units (total): 6  
75 hours / 3.5online

Name of the course administrator (if more than one name is mentioned)	7
Name: Dr. Mona Abdel Qader Ahmed Email: <a href="mailto:muna.alhamadani@uomosul.edu.iq">muna.alhamadani@uomosul.edu.iq</a>	
Name: Dr. Ahmed Hashem Ali Email: : <a href="mailto:ahmadhashim1082@uomosul.edu.iq">ahmadhashim1082@uomosul.edu.iq</a>	

### Course objectives: 8

theoretical:

- Enabling the student to understand and comprehend what is related to price analysis and what is related to the concepts associated with price discovery.
- Enabling the student to understand price changes over time and to know the methods of analyzing price trends.
- Enabling the student to understand the periodic and seasonal fluctuations in agricultural commodity prices and to understand the methods of measuring fluctuations.
- Enabling the student to know the types of demand, the factors affecting demand, demand elasticities, know the derivation of demand in the short and long term, and solve exercises on price elasticities.
- Enabling the student to display goods and factors affecting supply and supply elasticities, and to know the methods of analyzing supply and estimating the supply function.

The student will be able to identify the objectives and methods of government intervention in pricing agricultural products.

The student can identify mathematical models for measuring the economic effects of government intervention policies and know the methods for finding a sensitivity analysis matrix and nominal and actual protection coefficients.

### Teaching and learning strategies :-

Strategy
Interactive lecture, brainstorming, dialogue and discussion, explaining the importance of prices
Interactive lecture: brainstorming, dialogue and discussion in trend analysis
Interactive lecture, brainstorming, explaining cyclical fluctuations in agricultural commodity prices
Interactive lecture, brainstorming and comparison between seasonal fluctuations
Interactive lecture, brainstorming, dialogue and participation in estimating and deriving the supply function
Interactive lecture, brainstorming, dialogue and participation in deriving the demand function.
Interactive lecture, brainstorming, dialogue and discussion, assignment and report
Interactive lecture, brainstorming, dialogue and discussion, assignment and report
Interactive lecture, brainstorming, dialogue and discussion, assignment and report
Interactive lecture, brainstorming and comparison between the price of shadow traded and non-traded
Interactive lecture, brainstorming, dialogue and discussion
Interactive lecture, brainstorming, dialogue and discussion, assignment and report
Interactive lecture, brainstorming, dialogue and discussion
Charged with the duty of influencing government intervention in markets and marketing
He is assigned the task of solving an exercise.



Week	Week	Week	Week
Week 1 Week 2	Week 3 Week 4	Week 5 Week 6	Week 7 Week 8
Midterm Exam 1, Final Exam	<b>theoretical</b> Interactive lecture, brainstorming, dialogue and discussion,	price concept Interactive lecture, Concepts related to price discovery brainstorming, dialogue and discussion,	1B The student learns about prices, their importance, and how to determine the price.
Short practical test 1			B1 Shows the student methods and mechanisms that discover the price.In graphic forms
Midterm Exam 1, Final Exam	Interactive lecture, brainstorming, dialogue and discussion,	Price changes over time General trend	B2 Shows the student the direction and ways of direction.
Short practical test 1	Interactive lecture, brainstorming, dialogue and discussion,		4C The student solves the direction paths.
Midterm Exam 1, Final Exam	Interactive lecture, brainstorming, dialogue and discussion,	Analysis of cyclical fluctuations in commodity pricesLecture	B3 The student learns about cyclical fluctuations in agricultural commodity prices.
			2 theoretical 3 practical
			First week
			Second week
			Third week

	Duty	Interactive lecture, brainstorming, dialogue and discussion,	Cycle measurement	SCExplains to the student the measurement of cycles and how to measure them.	3 practic al	Week 4
Midterm Exam 1, Final Exam	Interactive lecture, brainstorming, dialogue and discussion,	Analysis of seasonal fluctuations in prices of agricultural commodities	B4Shows the student seasonal methods and explains them with graphical figures.	2 theoret ical		
Charged with a duty semester exam I, practical a report	Interactive lecture, brainstorming, dialogue and discussion,	Seasonality measurement methods	6 CThe student solves tabular data on how to find methods to measure seasonality.	3 practic al	Week 4	
	Interactive lecture, brainstorming, dialogue and discussion,	Display of agricultural goods	B5The student will estimate the supply function and explain the supply methods.	2 theoret ical		
Midterm Exam 1, Final Exam	Interactive lecture, brainstorming, dialogue and discussion,	Estimating the supply function	7 CThe student solves mathematical applications on the display.	3 practic al	Week 5	
Midterm Exam 1, Final Exam	Interactive lecture, Demand for agricultural commodities brainstorming, dialogue and discussion,		B6Explain to the student the derivation of demand and the explanation of demand elasticities.	2 theoret ical		
	Interactive lecture, brainstorming, dialogue and discussion,	Demand elasticities	8 CThe student solves exercises on elasticities of demand.	3 practic al	Week 6	

Midterm Exam 1, Final Exam	Interactive lecture, brainstorming, dialogue and discussion,	Behavioral behavior of agricultural commodity prices	A1 The student explains price behavior and changes in agricultural commodity prices.	2 theoret ical
Short practical test	Interactive lecture, brainstorming, dialogue and discussion,	Some global experiences of government intervention in agricultural product pricing	B12 The student learns about the Egyptian and American experience of support and aid.	3 practic al
Midterm Exam 1, Final Exam	Interactive lecture, brainstorming, dialogue and discussion,	Government intervention in pricing agricultural products	A2 Shows the student the methods of government intervention and the objectives of government intervention	2 theoret ical
Homework	Interactive lecture, brainstorming, dialogue and discussion,	Some global experiences of government intervention in agricultural product pricing	B12 The Iraqi experience in support and aid. The student learns about the Jordanian experience.	3 practic al
Midterm Exam 1, Final Exam	Interactive lecture, brainstorming, dialogue and discussion,	Some global experiences of state intervention in pricing agricultural products	B7 Explain to the student the effects of subsidies in supporting the reduction of grain prices.	2 theoret ical
semester exam2,practical	Interactive lecture, brainstorming, dialoguc and discussion,	Some global experiences of government intervention in agricultural product pricing	B12 The student learns about the Bangladeshi and Malaysian experience.	3 practic al
Midterm Exam 1, Final Exam	Interactive lecture, brainstorming, dialogue and discussion, self- learning	Effects of subsidies	C1 Shows the student the effects of support for producers and consumers.	2 theoret ical
				Week 10

Homework	Interactive lecture, brainstorming, dialogue and discussion,	The economic effects of grain price support	B13 The student learns about grain price support in Iraq and Syria.	3 practical
Midterm Exam 1, Final Exam	Interactive lecture, brainstorming, dialogue and discussion,	The role of shadow prices in analyzing government intervention in agricultural product pricing	C22 The student differentiates between the price of shadow trading and jealousy trading in it.	2 theoretical
Midterm Exam 1, Final Exam	Interactive lecture, brainstorming, dialogue and discussion,	The relationship between foreign exchange rates and government intervention in product pricing	B14 The student learns the methods of calculating the equilibrium exchange rate.	3 practical
Midterm Exam 1, Final Exam	Interactive lecture, brainstorming, dialogue and discussion,	Border price as a measure of efficiency and its impact on interventionist policy in commodity prices	A3 The student learns about the nature of the global market price.	2 theoretical
Midterm Exam 1, Final Exam	Interactive lecture, brainstorming, dialogue and discussion,	Government intervention and its relationship to foreign exchange rates	B15 Shows the student the role of the equilibrium exchange rate in price intervention policy.	3 practical
Midterm Exam 1, Final Exam	Interactive lecture, brainstorming, dialogue and discussion,	The relationship between state intervention policy in pricing agricultural products and some macroeconomic variables	B9 Shows the student the role of government determining the level of investment.	2 theoretical
semester exam2Final exam	Interactive lecture, brainstorming, dialogue and discussion,	The impact of price intervention policies on markets	B16 The student explains the impact of government intervention policy. For market integration	3 practical

			3 practic al	
Midterm Exam 1, Final Exam	Interactive lecture, brainstorming, dialogue and discussion,	The impact of price intervention policy on markets and marketing.	B10The student explains the impact of government intervention policy on markets and marketing.	2 theoret ical Fourteenth week
a test Chapter 3 practical	Interactive lecture, brainstorming, dialogue and discussion,	sensitivity matrix	C9The student solves exercises on the sensitivity analysis matrix.	3 practic al
Midterm Exam 1, Final Exam	Interactive lecture, brainstorming, dialogue and discussion,	Mathematical models used to measure the effects of state intervention	C3The student is given mathematical models to measure the impact of government intervention on product pricing.	2 theoret ical
Final exam	Interactive lecture, brainstorming, dialogue and discussion,	Mathematical models to measure the effects of state intervention	C10The student solves mathematical exercises on protection transactions.	3 practic al Week 15

**11- Course Evaluation**

Relative weight %	degree	Calendar appointment - week	Evaluation methods	T
5	5	My theory week 1-15	Final theoretical report +	1
10	5 5	Week 3	Short Test 1 Quiz	2
15	10 5	Week 9	Midterm exam Theoretical and practical	3
10	5 5	Week 12	Short Test 2 Quiz	4
20	20	Practical exam week	Final practical exam	5
40	40	Theoretical exam week	Final theoretical exam	
100	100		the total	

**12- Learning and teaching resources**

Price Analysis: Dr. Abdullah Ali Al-Zubaie

Theory teacher / Practical subject teacher

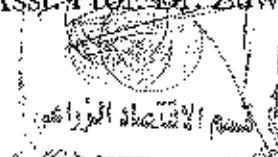
Dr. Mona Abdel Qader Ahmed Al-Hamdani, Dr. Ahmed Hashem Ali

Head of the Department of

Chairman of the Scientific Committee:

Agricultural Economics

Prof. Dr. Qais Nazim Ghazal, Asst. Prof. Dr. Zewaid Fathi Abdel



## Course description form

Course Name	1 <b>Foreign Trade</b>
Course Code	2 <b>INTR491</b>
Semester / Year	3 <b>Annual</b>
Date this description was prepared	4 <b>2025-2024 (The first autumn )</b> 1/9/2024
Available forms of attendance	5 <b>In person and electronically</b>
(study hours (total)/number of units (total Number of	6 <b>( 3.5 ) Number of units/ ( 75 ) Number of hours</b>
Name of the course administrator (if more than one name is mentioned)	7 <b>Dr. Ramia Amer Khalil Al - Allaf :Lecturer Dhanoun Yahya Practical teacher: Osama Laith and Madreka</b>
Course objectives 8  to foreign trade Introducing the student -1 of preparing Preparing agricultural cadres capable of familiarity with the means -2 research and knowledge of the trade balance development -for the purpose of self The skill of conducting field application - 3 and personal development and the skill of using educational methods which the department + the economy Qualifying them to advance the reality of -4 is interested in addressing in its study programs	
learning strategies Teaching and	9  Interactive lecture, brainstorming, dialogue and discussion of the -1 concept of foreign trade  The reasons for the establishment of foreign trade, the volume of -2 international transactions, volatility theories and the criticisms at them, and absolute cost theories and the criticisms directed -3 directed at them. The interactive lecture. Brainstorming, dialogue and discussion. Asking interactive questions about the lecture.  Hypotheses for formulating the theory -4 ing, dialogue and discussion of Interactive lecture, brainstorm -3 modern theory in foreign trade

Interactive lecture, brainstorming, assignment to prepare a report on the importance of planning in an agricultural project	-4
Interactive lecture and brainstorming A quick written exam on the eworth Fund The theory of factors of production Hexcher Edg Ohlin Criticisms of the theory Interactive lecture, brainstorming and dialogue Participation in international trade in modern thought The theory of technology variation, product life cycle theory, ent developments, and the concept of internal and external rec savings	-5
Interactive lecture, brainstorming, dialogue, participation in basics, -6 balance, and international exchange. Interactive lecture, brainstorming, dialogue and discussion, assigning tasks and preparing a report on education and its role, the role of technology, and the dumping model	
Interactive lecture, brainstorming, dialogue and discussion, -7 assignment of tasks and a report on the nature of exchange rates, international tradetypes of exchange, exchange and inte	
Interactive lecture, brainstorming, dialogue and discussion, -8 assignment to prepare a report on the concept of balance and foreign investment transactions. Interactive lecture, brainstorming, mpare the dialogue and discussion, preparing a table to co .concept of tariffs and subsidies	
Incentives Interactive lecture, brainstorming, dialogue and -9 discussion Prepare a report on multinational companies	
Interactive lecture, brainstorming, dialogue and discussion, -10 onassignment and report on globalizati	
Interactive lecture, brainstorming, dialogue, and discussion. A -11 quick test on foreign trade strategies	
He is assigned a homework assignment explaining the types of -12 strategies used in foreign trade	
then makes Assigns the duty and research of planning experiences an -13 a comparison of the internal and external savings of trade	

Course structure 10



Evaluation method	Teaching method	Name of the unit or topic	Required learning outcomes	hours	the week
Daily exams	person -In lectures	The nature of foreign trade	The student C1,b1,a1 be able to know should and understand foreign trade	2 Theoretical	The first week
Duties	person -In lectures	Traditional theories of foreign trade	The student a16,b13 should be able to know and understand business theories	Pract3 ical	
Daily exams	person -In lectures	The theory of relative costs	The student A2, C2 should be able to know and understand foreign trade methods and relative costs	2 Theoretical	second week
Duties	person -In lectures	Criticism of Ricardo	Costs a17,b14,c13 should be recognized David Relativity and Ricardo's theory	3 practic al	
Duties	person -In lectures	Neoclassical theory	The student A3, C3, B2 should be able to know and understand classical theory	2 Theoretical	the third week
Duties	person -In lectures	Criticisms directed at classical theories	about Learn a18,b15 the classic theories of exterior carpentry	Pract3 ical	
Daily exams	person -In lectures	Modern modern theories	The student A4, B3, C4 should be able to know and understand modern theories	2 Theoretical	fourth week
Duties	person -In lectures	Product life cycle	The student a19,b16 should be able to know and understand modern theories	Pract3 ical	
Daily exams	person -In lectures	Krugman's theory in the short and long run	The student a5, b4, c5 should be able to know the and understand range -and long -short theories of Krugman's	2 Theoretical	The fifth week

Duties	person -In lectures	Criticisms of Krugman's theory	.theory Identify the a20,b17 criticisms of Krugman's theory	Practical	
Semester exam	Semester exam	Balance of Payments	The student a6,b5,c6 should be able to know the balance of payments	2 Theoretical	the sixth week
Duties	person -In lectures	Visible and invisible goods and services	Identify the a21,b18 structure of the balance of payments	Practical	
Daily exams	person -In lectures	Balance of payments imbalances	The student a7, b6, c7 should know how to address imbalances in the balance of payments	2 Theoretical	Seventh week
Duties	person -In lectures	Ways to address imbalances in the balance of payments	The student a22,b19 should learn about how to address the imbalance in the balance of payments and the experiences of successful countries	Practical	
Daily exams	person -In lectures	Exchange prices	The student a8,b7,c8 should be able to know and understand exchange rates	2 Theoretical	The eighth week
Duties	person -In lectures	Types of exchange rates	The student a2 , b20 should be able to know and their exchange rates benefits	Practical	
Daily exams	person-In lectures	Customs tariff	The student a9,b8,c9 should be able to know the and understand customs tariff	2 Theoretical	Week nine

Duties	person -In lectures	The difference between customs tariffs, subsidies and incentives	The student a24,b21 to know should be able customs tariff For Chart	Practical	
Daily exams	person -In lectures	Globalisation	The student should a10 able to know and be understand Methods of globalization	Theoretical	2 The tenth week
Duties	person -In lectures	Trade openness	Identify the a25,b21,c14 benefits and harms of trade openness	Practical	
Daily exams	person -In lectures	Developing countries and the international monetary system	The student a11,b9,c10 should be able to know the and understand international monetary system	Theoretical	2 Week eleven
Duties	person -In lectures	International Monetary Fund	Learn about the a26,b22 International Monetary system Fund	Practical	
Daily exams	person -In lectures	International Monetary Fund system	The student a12,b10 should be able to know the and understand international monetary system in developing countries	Theoretical	2 The twelfth week
Duties	person -In lectures	Linder's theory	Learn about a27,b23,c15 Linder's theory of demand overlapping	Practical	
Daily exams	person -In lectures	The importance of trade in developing countries	The a13, b11, c11 student should be able to the know and understand importance of foreign trade	Theoretical	2 The thirteenth week
Duties	person -In lectures	Dumping model	Recognize a28,b24 mutual dumping	Practical	3 practical

Daily exams	person -In lectures	Policies and strategies for foreign trade	The a14, b12, c12 student should be able to know and understand foreign trade policy strategies	2 Theoretical
				The fourteenth week
Duties	person -In lectures	power Five theory	The a29,b25,c16 student's knowledge of the five forces theory in foreign trade	Practical
Semester exam	Semester exam	Commerce-E	The student a15, b12, c12 should know about electronic commerce	2 Theoretical
Duties	person -In lectures	Advantages and benefits of electronic commerce	Understanding a30,b26 the types, methods, and disadvantages benefits of electronic commerce	Practical

#### Course evaluation 11

Attendance 5%  
 %5 (Quiz ) Short tests  
 First semester exam 15%  
 Second semester exam 15%  
 Pursuit score 40%  
 Final exam 60%  
 grade 100% Final

#### Learning and teaching resources 12

Foreign Trade Book	Dr. Marwan Abdel Malek Thanoun	(Required textbooks (methodology, if any
Arab foreign and agricultural trade-Total intra Mahmoud Muhammad Fawaz.	Dr. Sarhan Suleiman Ahmed	(Main references (sources
Agricultural Foreign Trade Book	Dr. Bassem Badri-Hazem Al Agro-lib.site	Recommended supporting books and (...references (scientific journals, reports Electronic references, Internet sites

-Practical subject teacher: Alaf-Subject teacher: Dr. Ramya Amer Khalil Al  
Eng. Osama Laith

M. Yahya's sins are aware

Chairman of the Scientific Committee, Head of the Agricultural Economics  
Department

Prof. Dr. Alaa Muhammad Abdullah Mr. Dr. Alaa Muhammad Abdullah



## Course description form

1.	Course name	Econometrics
	Econometrics I	
2.	Code	Course Code
		ECNM486
3.	Semester	Year
		semester Stage 4\2024\2025
4.	Date this description was prepared	
		2024/9/1
5.	Available forms of attendance	
		My presence+ online
6.	(Number of study hours (total)) number of units (total)	
	number of units ,45 :Theoretical hours: 30 hours / Practical hours: 3.5 units	
7.	(Name of the course administrator if more than one name is mentioned)	
	Name <u>waleed salman</u> salman.waleed@univ.edu.iq	
	Name <u>emran faisal mohamed</u> emran.faisal@unimodul.edu.iq	
	Name <u>farah muhsen</u> farah.muhsen@unimodul.edu.iq	
<b>8. objectives Course</b>		
practical		theoretical
<p>Defining econometrics and explaining the relationship with other sciences</p> <p>Enabling the student to know the most important basic pillars of econometrics</p> <p>The student explains the types of structural equations graphically and mathematically their elasticities And methods for calculating</p> <p>Introducing the student to simple regression and knowing all regression tests</p> <p>Enable the student to measure the morale of variables</p> <p>understand and Enabling the student to understand the concepts related to econometrics, along with the extent to which the student applies econometrics methods and methods in the practical field</p> <p>Enabling the student to know the solution to the - based on the student's and based ((T, F,R2, R-2 ) tests practical experience, without giving importance to the subject</p> <p>Enabling the student to solve mathematical - exercises for statistical tests</p> <p>Enabling the student to solve the mathematical - that exercises for standard tests and other tests accompany them</p> <p>The student can learn about the most important - tests and how to apply them</p> <p>Enable the student to measure the effect of</p>		<p>The student learns about the concept - econometrics</p> <p>Explains to the student the objectives of curriculum. It explains to the student the hypotheses, and pillars of econometrics and its relationship to other sciences</p> <p>The student solves some steps of econometrics</p> <p>Introduction to econometric models</p> <p>Shows the student the economic model and types of equations</p> <p>Enabling the student to understand and - to understand what is related</p> <p><b>And work to econometrics</b></p> <p>of the The student's awareness <b>know</b> and role of econometrics in importance practical applications and economic research</p> <p>Enable the student to know simple - regression</p> <p>the most Enabling the student to know - important economic and statistical tests</p> <p>Enabling the student to know the most - important statistical tests</p>

independent variables on the dependent variable by conducting many economic and statistical tests	know the most important standard problems with the causes of to know the student - standard problems facing variables
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## 9. learning strategies Teaching and

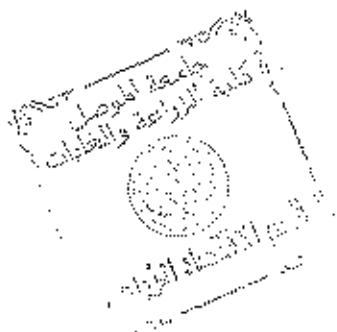
The strategy	<p>The origins and Interactive lecture, brainstorming, dialogue and discussion statement concept of econometrics</p> <p>The relationship between discussion Interactive lecture, brainstorming, dialogue and econometrics, mathematics and statistics</p> <p>of econometrics pillars Interactive lecture, brainstorming, clarifying the goals and Types of economic models Interactive lecture and brainstorming</p> <p>Interactive lecture, brainstorming, dialogue, and participation in estimating the <math>(R^2)</math> efficient multiple determination coefficient</p> <p>Interactive lecture, brainstorming, dialogue, and participation in the corrected Corrected coefficient of and <math>(R^2)</math> modified coefficient of determination <math>(R^2)</math> determination</p> <p>In creating and installing Interactive lecture, brainstorming, dialogue, participation in the model, and building the economic relationships of the model</p> <p>Interactive lecture, brainstorming, dialogue and discussion, assigning tasks and the types of structural equations that make up the model or economic on reporting .elsmod</p> <p>Confidence (<math>F</math>) Interactive lecture, brainstorming, dialogue and discussion, test (<math>t</math>) (<math>R</math>) correlation coefficient and intervals</p> <p>Interactive lecture, brainstorming, dialogue and discussion, assigning tasks and tionlinear regression equa Simple reporting</p> <p>) the Ordinary Least Squares to explain Interactive lecture and brainstorming .method (OLS)</p> <p>Assumptions of least Interactive lecture, brainstorming, dialogue and discussion <math>(B^{\alpha\beta})</math> squares estimators</p> <p>and discussion, assigning tasks and Interactive lecture, brainstorming, dialogue Bivariate linear economic model reporting</p> <p>Interactive lecture, brainstorming, dialogue and discussion, assigning tasks and .on the types of models reporting the economic model</p> <p>Types of functions and and discussion Interactive lecture, brainstorming, dialogue flexibility of parameters</p> <p>forecasting in Interactive lecture, brainstorming, dialogue and discussion</p>
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#### 10. Course structure

Evaluation methods	Learning method	Name of the unit of time	Measured learning outcomes	Hours	One week
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style reporting Assigning tasks and	Econometrics concept econometrics of emergence Objectives of econometrics	The student becomes familiar A1 economics the concept of with the Explains to the student B1 origins and concept of econometrics	2	Theoretical
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style reporting Assigning tasks and	Mathematical application of the most important economic models	The student learns the types of C1 economic models	Practical	
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style reporting Assigning tasks and	The economics theory curriculum and its pillars	The Explains to the student B2 relationship between econometrics, mathematics and statistics	2	Theoretical
Short exams Assignment of duty discussions	Auditory methods writing on the blackboard Style of Direct dialogue style reporting Assigning tasks and	Analysis of types of economic models	How to analyze and calculate D1 variables	Practical	
Short exams Assignment of duty discussions	Auditory methods writing on the blackboard Style of Direct dialogue style reporting Assigning tasks and	Standard processing steps	of the objectives and. Definition A2 pillars of econometrics	2	Theoretical
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style reporting Assigning tasks and	Solve equations using the from method reduced	Types of structural equations B3 Presentation and building of C3 economic relations	Practical	



Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style reporting Assigning tasks and	Formation and installation of the and building economic model relationships	the types of economic shows B4 models	2 Theoretical
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style reporting Assigning tasks and	Reasons and justifications for introducing a random variable	The student learns graphically C4 to calculate and mathematically ways variables	Practical
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style reporting Assigning tasks and	Reasons for choosing the least squares method	estimates the The student B5 coefficient of multiple determination ( $R^2$ )	Theoretical
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style reporting Assigning tasks and	Derivation by substitution method	The student analyzes to derive D2 model parameters	Practical
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style reporting Assigning tasks and	Types of economic dynamics models	Explains to the student the B6 the coefficient relationship between and ( $R^2$ ) of determination Corrected coefficient of determination ( $R^2$ ) determination	2 Theoretical
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style reporting Assigning tasks and	Deviation: Derivation using the method	How to calculate simple C5 regression equation	Practical
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style reporting Assigning tasks and	Properties of ordinary least squares	Explains to the student the B7 creating and installing the concept of model and building the economic relationships of the model	2 Theoretical
Short exams Assignment of	Auditory methods Style of writing on the blackboard	determinants Derivation using	BLUP property How to prove the C6	Practical



Short exams Assignment of duty discussions	Direct dialogue style reporting Assigning tasks and Auditory methods Style of writing on the blackboard Direct dialogue style reporting Assigning tasks and	Derive linear model OLS method parameters by	Shows the student how to use B3 types of structural equations that make up the model or economic models	2 Theoretical	
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style reporting Assigning tasks and	the linear property Derivation of	Prove the linear property C7 Impartiality How to derive D3	Practical	8
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style reporting Assigning tasks and	Economic criteria Statistics and measurement	Explain to the student the effect B9 variance and standard deviation of	2 Theoretical	
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Dialogue style Direct dialogue style reporting Assigning tasks and	Exercises on the effects of the confidence interval and the coefficient of determination test	) to test Shows the student how B10 confidence intervals and the (F (r) (R <sup>2</sup> ) correlation coefficient	Practical	9
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks	Statistical criteria for the OLS estimators significance of	The student learns about A3 explanation of the Ordinary Least method (OLS ) Squares	2 Theoretical	
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks	Types of elasticities	T test recognizes the A4 how to mathematically learn C8 SD calculate	Practical	10
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style reporting Assigning tasks and	random Characteristics of a variable	The student learns about the A5 assumptions of least squares estimator	2 Theoretical	
Short exams Assignment of	Auditory methods Style of writing on the blackboard	Confidence intervals	The student distinguishes B2 between types of functions and their	Practical	11



duty discussions Short exams Assignment of duty discussions	Direct dialogue style reporting Assigning tasks and Auditory methods Style of writing on the blackboard Direct dialogue style reporting Assigning tasks and	R Correlation coefficient	The student learns about AS variable linear economic model -on n. two How to derive IC 9 variable linear economic model linear economic How to do so B11 and more model, with two variables	Theoretical	2
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard dialogue style Direct reporting Assigning tasks and	Estimate the regression equation when the constant is zero	The student distinguishes and D4 compares models with two or more variables	Practical	
Short exams Assignment of duty discussions	Auditory methods the blackboard Style of writing on Direct dialogue style reporting Assigning tasks and	Static and kinetic models	Shows the student the difference B12 between types of models Forms of equations C10	Theoretical	3
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style reporting Assigning tasks and	the coefficient of determination	Compare and distinguish D5 between types of determination coefficients distinguishes between the L2 the goodness of fit coefficient and correlator	Practical	3
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style reporting Assigning tasks and	For linear, logarithmic and functions inverse	the types Explains to the student D3 of functions and the clarifies of the parameters	Theoretical	4
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style reporting Assigning tasks and	modified or corrected coefficient of determination	The student analyzes the D6 properties of least squares hypotheses	Practical	4



Short exams Assignment of duty discussions	Writing style on Auditory methods Direct dialogue style the blackboard reporting Assigning tasks and	Forecasting methods	Defines the student's prediction U14 path	2	Theore tical	
Short exams Assignment of duty discussions	Writing style on Auditory methods Direct dialogue style the blackboard reporting Assigning tasks and	Testing the strengths or weaknesses of the standard model:	The student learns how to B13 describe the model The student compares the best D7 types of models	3	Practi cal	



Course evaluation		Class	Calendar a week -appointment	Calend ar metho ds
Relative e weight %				
5	5	15-1 My theory week		Final theoret ical report +
10	5 5	Week 3		Quiz Short test 1
15	10 5	Week 9		Midterm test Theoretical and practical
10	5 5	Week 12		Short test 2 Quiz
20	20	Pract ical exam week		Final practic al test
40	40	A week of theor etical exam		Final theoret ical test
100	100			the total

#### 12-Learning and teaching resources

Saifu-Introduction to Econometrics: Dr. Walid Ismail Al-1

Saifu and Dr. -Analytical Econometrics BIM Theory and Application Dr. Walid Ismail Al -2

Ahmed Muhammad Mishal

Damodar N.Gujarati (2004) Basic Econometric Tata Mc Graw -Hill Edition, 4th -3  
Edition, New Delhi

Theoretical teacher: Dr. Walid Ibrahim Sultan

Practical teacher: Eman F. Mohammad

Head of the Agricultural Economics Department

Prof. Dr. Ahsa Muhammad Abdullah

and Farha M. Ali

Chairman of the Scientific Committee

Dr. Ahsa Muhammad Abdullah

## Course description form

1. Course name	Econometrics 2
	Econometrics 2
2. Course Code	MCNM492
3. Semester/Year	2025/2024 fourth/ semester
4. Date this description was prepared	2025/2/1
5. Available forms of attendance	My presence+ online
6. (Number of study hours (total)/number of units (total)	number of units ,45 ; Theoretical hours: 30 hours / Practical hours: 3.5 units
7. (Name of the course administrator (if more than one name is mentioned)	Name : Dr.waleed ibahim sultan. waleedsultan@nuo.edu.qa Name : salah f.shaba: salahodesh@nuo.edu.qa Name : Eman f. Mohammd . eman.faisal@nuo.edu.qa

8. objectives Course	
<p>: practical</p> <p>Enabling the student to understand and - understand the concepts related to econometrics, along with the extent to which the student applies econometrics methods and methods in the practical field</p> <p>Enabling the student to know the solution to the - tests T, F R<sup>2</sup>, and R<sup>-2</sup>) the student's Depending on ( practical experience, importance is not given to the subject</p> <p>Enabling the student to solve mathematical - exercises for statistical tests</p> <p>g the student to solve the mathematical Enablin - exercises for standard tests and other tests that accompany them</p> <p>The student can identify the most important - standard problems and how to get rid of these four standard problems</p> <p>st important The student can learn about the mo - standard problems and how to get rid of these four standard problems and how to deal with each problem through detection methods and relying on the standard method to get rid of problems in a way that ensures the integrity of the variables and dealing with them through the consequences</p>	<p>:theoretical</p> <p>Enabling the student to understand and - understand what is related to econometrics student's awareness the And work to determine of the importance and role of econometrics in practical applications and economic research</p> <p>Enable the student to know multiple - regression</p> <p>Enabling the student to know the most - important economic and statistical tests student to know the most Enabling the - important statistical tests</p> <p>Enabling the student to know the most - important standard problems</p> <p>Enables the student to know the causes of - standard problems facing variables</p> <p>The student can learn the most important - ectecting the four standard methods for d -problems (multiple linear correlation stationarity of variance -non-autocorrelation .(error problem - )</p> <p>The student can know the economic effects - of each of the standard problems</p>

<p>resulting from them</p> <p>Acquiring skills in dealing with the pillars of -variables -econometrics (such as data forms), each in proportion to the -relationships type of variable</p>	<p>The student can identify main economic variables</p>
<h3>9. Teaching and learning strategies</h3>	
<b>The strategy</b>	<p>The origins and concept of econometrics</p>
	<p>The relationship between econometrics, mathematics and statistics</p>
	<p>clarifying the goals and pillars of econometrics</p>
	<p>Interactive lecture and brainstorming Types of economic models</p>
	<p>Interactive lecture, brainstorming, dialogue and discussion, explaining the multiple linear regression model</p>
	<p>-dialogue and discussion of contrasts and co-variations</p>
	<p>Interactive lecture, brainstorming, explaining the variance of the random (<math>\sigma^2 u_i</math>) variable</p>
	<p>for the significance of T test Interactive lecture, brainstorming, and creating a the parameters</p>
	<p>lecture, brainstorming, dialogue, and participation in estimating the Interactive (R<sup>2</sup>) multiple determination coefficient</p>
	<p>Interactive lecture, brainstorming, dialogue, and participation in the corrected d adjusted and the correcte (R-2) adjusted coefficient of determination .(R-2) coefficient of determination</p>
	<p>Interactive lecture, brainstorming, dialogue, and participation in the partial correlation coefficient</p>
	<p>Interactive lecture, brainstorming, dialogue and discussion, assignment of tasks .report (GLM ) land general linear mode</p>
	<p>(F ) Interactive lecture, brainstorming, dialogue and discussion, test</p>
	<p>Interactive lecture, brainstorming, dialogue and discussion, assigning tasks and reporting the multiple linear regression equation using the general linear model (rix methodmat)</p>
	<p>Interactive lecture and brainstorming of the four standard problems (multiple error problem -stationarity of variance -non -autocorrelation -linear correlation</p>
	<p>Interactive lecture, brainstorming, dialogue and discussion of the ity problemmulticollinear</p>
	<p>Interactive lecture, brainstorming, dialogue and discussion, assignment of tasks reporting of the problem-and self</p>
	<p>Interactive lecture, brainstorming, dialogue and discussion of the problem of</p>

stationarity of variance-non

rainstorming, dialogue, and discussion on the problem Interactive lecture, b  
of errors and formal variables



IC: Course structure		Name of the unit/ example	Integrated learning outcomes	Code	BIBLIO
Evaluation methods Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style reporting Assigning tasks and	Econometrics course emergence of econometrics Objectives of econometrics	student becomes familiar with the concept of econometrics with the Explains to the studentB1 origins and concept of econometrics	2	Theoretical
Short exams Assignment of duty discussions Short exams Assignment of duty discussions Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style reporting Assigning tasks and Auditory methods Style of writing on the blackboard Direct dialogue style reporting Assigning tasks and Auditory methods Style of writing on the blackboard Direct dialogue style reporting Assigning tasks and	Mathematical application of inequalities Multiple regression and its interpretations Mathematical application of covariances	contrasts learnsC1 Estimating equation for multiple regression model How to analyze covariancesD1	Pract. C1 B2 Pract. D1	Theoretical
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style reporting Assigning tasks and	test steps Testing the significance of explanatory variables	test-1 Definition ofA2 Types of hypothesesB3 Present the null and alternative C3 hypotheses	2	Theoretical



Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style reporting Assigning tasks and Auditory methods boardStyle of writing on the black Direct dialogue style reporting Assigning tasks and	Quality of teaching Applications to mathematical problems of the coefficient of determination	shows the multiple determinant of B4 R2 coefficient	2 Theore tical
Short exams Assignment of duty discussions	Auditory methods blackboardStyle of writing on the bla Direct dialogue style reporting Assigning tasks and Auditory methods Style of writing on the blackboard dialogue style Direct reporting Assigning tasks and	GLM General Linear Model Assumptions of the general linear model	The student estimates the partial B5 (r) correlation coefficient the linear The subject analyzesD2 model	2 Theore tical
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks	a linear modelSimp	Explains to the student the B6 the coefficient relationship between and (R2 ) of determination Corrected coefficient of (R 2 ) determination	2 Theore tical
Short exams Assignment of duty discussions	Auditory methods of writing on the blackboard Style Direct dialogue style Assigning tasks	Multicollinearity model	How to calculate simple CS regression equation	Practi cal
Short exams Assignment of duty discussions	Auditory methods le of writing on the blackboardStyle Direct dialogue style reporting Assigning tasks and	Reasons for the emergence of standard problems	Explains the concept to the B7 Standard problem student	2 Theore tical
Short exams Assignment of	Auditory methods kboardStyle of writing on the bla	Causes of standard problems	How to prove that the problem Ch occurred	Practi cal



Short exams Assignment of duty discussions	Direct dialogue style reporting Assigning tasks and Auditory methods Style of writing on the blackboard Direct dialogue style reporting Assigning tasks and	Shows the student the B8 multicollinearity problem MC	Theoretical
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style reporting Assigning tasks and	MC	Practical
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style reporting Assigning tasks and	Perfect and imperfect linear correlation	Theoretical
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard dialogue style Direct reporting Assigning tasks and Auditory methods Style of writing on the blackboard Dialogue style Assigning tasks	an MC Methods for detecting problem	Shows the student how to detect B10 the problem
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Dialogue style Assigning tasks	Kloher -Escape method	The student learns about A3 Klein detection method
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Dialogue style Assigning tasks	Mathematical application of the multicollinearity problem	Information processing methods A4 ways to mathematically Learn C5 get rid of the problem
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Dialogue style Assigning tasks	Reasons for the emergence of the correlation problem of self	The student familiarizes A5 with the concept of the autocorrelation problem
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Dialogue style	for detecting the Methods autocorrelation problem	The student distinguishes E2 implications of the autocorrelation problem



<u>discussions</u>	<u>reporting Assigning tasks and</u> Auditory methods Style of writing on the blackboard Is Direct dialogue style <u>reporting Assigning tasks and</u>	<u>Detection methods</u>	The student learns how to get rid A5 Cochran object using two of the pr (Ocas method (conversion method How to identify the reply or C 9 representer method general How to learn about the B11 least squares method	2	Theore tical
<u>Short exams</u> <u>Assignment of</u> <u>duty</u> <u>discussions</u>	<u>Auditory methods</u> blackboard Style of writing on the bl Direct dialogue style <u>reporting Assigning tasks and</u> Auditory methods Style of writing on the blackboard Direct dialogue style <u>reporting Assigning tasks and</u>	<u>rest method</u> W. Watson-	The student distinguishes D4 between detection methods (von ratze - Heishaw - Helle - Neumann the explain to the student B12 stationarity of problem of non variance	Pract 3 ical	12
<u>Short exams</u> <u>Assignment of</u> <u>duty</u> <u>discussions</u>	<u>Auditory methods</u> Style of writing on the blackboard Direct dialogue style <u>reporting Assigning tasks and</u> Auditory methods Style of writing on the blackboard Direct dialogue style <u>reporting Assigning tasks and</u>	<u>causes of the problem of impli</u> <u>stationarity of variance-non</u>	Forms and reasons for the C10 emergence of the problem	2	Theore tical
<u>Short exams</u> <u>Assignment of</u> <u>duty</u> <u>discussions</u>	<u>Auditory methods</u> Style of writing on the blackboard Direct dialogue style <u>reporting Assigning tasks and</u> Auditory methods Style of writing on the blackboard Direct dialogue style <u>reporting Assigning tasks and</u>	<u>the problem of non Exercises on</u> <u>consistency of contrast</u>	Compare and differentiate DS detection methods between det distinguishes between the E3 implications of a probem	Pract 3 ical	13
<u>Short exams</u> <u>Assignment of</u> <u>duty</u> <u>discussions</u>	<u>Auditory methods</u> Style of writing on the blackboard Direct dialogue style <u>reporting Assigning tasks and</u> Auditory methods Style of writing on the blackboard Direct dialogue style <u>reporting Assigning tasks and</u>	<u>decreasing contrast-increasing -</u>	Explains to the student the types B13 of contrast	2	Theore tical
<u>Short exams</u> <u>Assignment of</u> <u>duty</u> <u>discussions</u>	<u>Auditory methods</u> Style of writing on the blackboard Direct dialogue style <u>reporting Assigning tasks and</u> Writing style on Auditory methods logic style Direct on the blackboard	<u>volume address the</u> <u>problem of contrast inconsistency</u>	The student analyzes detection D6 (Spearman test) methods	Pract 3 ical	14
<u>Short exams</u> <u>Assignment of</u>		<u>Disposa. methods</u>	specifies the methods of B14 - detection for the student (Park)	2	Theore tical



duty discussions	reporting Assigning tasks and		-Q( and I ) due to non -Goldfeld constancy of variance	heat
Short exams	Writing style or Auditory methods		The student learns from lag BIS mode's	Prac. ID cat
Assignment of duty discussions	ver dialogue styleD; the blackboard reporting Assigning tasks and	Lag - variable Models	fiercious and formal comparesD7 metaphors	



Course evaluation -II			
Relative e weight %	Class	Calendar a week -appointment	Calend ar metho ds
5	5	15-1 My theory week	Final theoret ical report +
10	5 5	Week 3	Quiz short test 1S
15	10 5	Week 9	Midterm test Theoretical and practical
10	5 5	Week 12	Short test 2 Quiz
20	20	Pract ical exam week	Final practic al test
40	40	A week of theor etical exam	Final theoret ical test
100	100		the total

#### 12-Learning and teaching resources -

Saifu-Introduction to Econometrics; Dr. Walid Ismail Al-1

Saifu and Dr. -Analytical Econometrics BIM Theory and Application Dr. Walid Ismail Al -2

Ahmed Muhammad Mishal

Damodar N.Gujarati (2004) Basic Econometric Tata Mc Graw -Hill Edition, 4th -3  
Edition, New Delhi

Theoretical teacher: Dr. Walid Ibrahim Sultan

Practical teacher: Eman F. Mohammad

and salah F. Shaba

Agricultural Economics Department Head of the A

Chairman of the Scientific Committee

Dr. Zayed Iathi abd

Dr. Sayy N. Ghazal

## Course Description Form

### Academic Program Review

#### Course Description

This course description provides a concise summary of the course characteristics and the learning outcomes expected of the student, demonstrating whether the student has made the most of the available learning opportunities. It must be linked to the program description.

Ministry of Higher Education and Scientific Research/University of Mosul/ College of Agriculture	-1 Educational Institution
and Forestry Agricultural	-2 Scientific Department/Center
Economics Agricultural Policy/489AGPO	-3 Course Name/Code
Saoud	-4 forms of attendance available
electronic / 2024-2025	-5 semester/year
30	-6 Number of study hours (total)
2024/9/1	-7 Date of preparation of this description -8

#### Course objectives

- 9 Educational benefit: as previous scientific theories help us understand contemporary theories and ideas more easily.
- 10 Identifying the reality of the agricultural sector and the policies necessary to develop it.
  - (i) Study the principles and basics of agricultural economic policy
  - (ii) Identify the policies necessary to improve the reality of the agricultural sector and the most important types of agricultural policies.

#### -9 Course outcomes, teaching, learning and assessment methods

##### A- Cognitive objectives

Studying methods for implementing agricultural policy, the possibility of applying agricultural technology and studying the opportunities available for plant and animal agriculture projects.

##### B- Course specific skill objectives

Our students can draw new inspiration from studying agricultural policy, which will help in scientific progress in the agricultural field and achieve...  
Development and economic growth in agricultural output.

##### Teaching and learning methods



<p>Using scientific methods and evaluate means to deliver the material to the student and enable him to understand it.</p>
<b>Evaluation methods</b>
Assessment is based on participation, discussion, asking and answering questions, and linking topics with intellectual questions.
<b>C- Emotional and value-based objectives</b>
<p>C 1 Instilling a sense of professionalism and scientific methodology in economic thinking in the agricultural field.</p> <p>C 2 Encouraging students to think and attempt to analyze and address the agricultural economic problems surrounding them within their community, according to available agriculture methods and policies.</p>
<b>Teaching and learning methods</b>
<ul style="list-style-type: none"> <li>• A. Student participation in preparing the material</li> <li>Conducting discussions on external questions related to the subject from reality as well, attempting to link the theoretical aspect of the subject to practical reality.</li> <li>• C. Explaining the subject's vocabulary conceptually, while trying to link it to reality, so that the student can understand it.</li> </ul>
<b>Evaluation methods</b>
Adopting evaluation through participation, discussion, asking and answering questions, and linking topics to intellectual questions from the current economic reality of the countries, especially our country, req.

<p><b>100.00 - General and transferable skills (other skills related to employability and personal development)</b></p> <p>Teaching students to complete preparing assignments daily in writing to prevent material from becoming without comprehension and understanding. Teaching students to discuss and conduct possible dialogue on the subject topics.</p>
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**-10 Course structure**

Teaching method	Evaluation method	Unit name/topic	Hours Required	Learning Outcomes	The week
Tests and discussions	Individual	The nature and dimensions of general economic policy	1	Economic policy objectives	1
Tests and discussions	Individual	The nature and dimensions of general economic policy	1	Measures that economic policies resort to to achieve their goals.	4
Tests and discussions	Individual	Economic Analysis and Agricultural Policy	1	Means of achieving agricultural policy goals.	4
Tests and discussions	Individual	Economic Analysis and Agricultural Policy	1	Means that can be followed to implement agricultural policies in developing countries.	4
Tests and discussions	Individual	Agricultural price policy	1	Conditions that must be met in the objectives of agricultural policy.	4
Tests and discussions	Individual	Agricultural price policy	1	Production stability and market prices of agricultural crops	4
Tests and discussions	Individual	Ways to achieve stability for farmers	1	Union of Agriculture Producers	4
Tests and discussions	Individual	Ways to achieve stability for farmers	1	Government programs for farmers	4
Tests and discussions	Individual	Agricultural marketing policy	1	How to spot it	4
Tests and discussions	Individual	Agricultural marketing policy	1	Application form	4
Tests and discussions	Individual	Agricultural investment policy	1	Agricultural investment policy planning	4
Tests and discussions	Individual	Agricultural investment policy	1	Agricultural investment policy planning	4
Tests and discussions	Individual	Agricultural Credit Policy	1	Three phases of agricultural credit	4
Tests and discussions	Individual	Agriculture Credit Policy	1	The role of government	4
Tests and discussions	Individual	Review	1	Analytical and analytical requirement	4

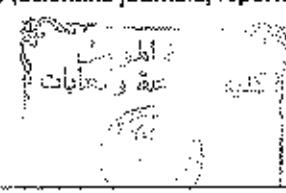
**-11 Infrastructure**

- Salem Tawfiq Al-Najfi and Abdul Razzaq Abdul Hamid, Agricultural Economic Policy, Iraq, University of	-1 Required textbooks

Mosul, Directorate of Books for Printing and Publishing, 1990.  - Dr. Nidal Mahrnoud's lectures, delivered in the Department of Economics, Agricultural Policy course, for various years.  - Abdul Wahab Matar Al-Dahri, Agricultural Economics, Directorate of Dar Al-Kulub for Printing and Publishing.  Iraq, University of Mosul, Second Edition, 1987.  Salem Tawliq Al-Na'fi and Ismail Obaid Hammadi, Agricultural Planning - Development Planning and Agricultural Policy, Iraq, University of Mosul, Directorate of Dar Al-Kutub for Printing and Publishing, 1989.	
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2 - Main references (sources)
Adu Ghefouri Ibrahim Ahmed, An Economic Perspective on the Food Problem in Iraq, Dar Zahrar for Publishing and Distribution, Iraq, 2008.  Omar Namid Majood, Foreseeing the Future of Agricultural Development In Iraq in the Shadow of the Global Food Crisis, Master's Thesis, University of Baghdad, College of Administration and Economics, Department of Economy, 2010.  - Mohamed Omar El-Tanoubi, Adapting Modern Agricultural Technology to Development Requirements in Developing Countries, First Edition, A Eshata Technical Library and Printing House, Egypt, 2001
- Ataa Wajeeh Mandi Al-Naimi, The Role of Technica Progress in Developing the Agricultural Sector in Iraq - Ninewa Governorate as a Model, Master's Thesis, University of Mosul, College of Adminstration and Economy, 2005.

**A- Recommended books and  
references (scientific journals, reports, etc.)**



Book cover

Omar Hamid Majeed, the possibility of achieving agricultural development  
Sustainable Development in Iraq: a research published in the Journal  
of Economic and Administrative Sciences, University of Baghdad,  
Issue 121, Volume 28, 2020.

- Rahman Hassan Ali Al-Maksousi, Agricultural Economics, Taif Printing  
Company Limited, Baghdad, 2007.
- Tariq Al-Akili, Microeconomics, Dar Al-Kutub for Printing and Publishing,  
University of Mosul, 2001.
- Abbas Fadhel Al-Saadi, Food Security in Iraq: Reality and Ambition, Dar  
Al-Hikma for Printing and Publishing, Baghdad, 1990.

#### B- Electronic references, websites...

#### -12 Curriculum Development Plan

Updating agricultural data on production and available agricultural resources and studying agricultural policies in Iraq and other countries

Book for the Development of Agricultural Economics  
Assaf P. Int. Development Party Audit

Subject teacher  
Dr. Basim Amr Khalil

Chairman of the Scientific Committee

Prof. Dr. Gazi Nader Ghazal



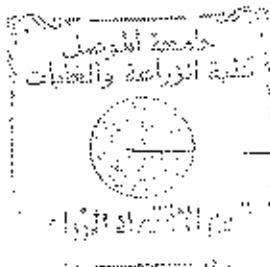
### Course description form

Course Name:	Natural resource economics	
Course Code:	REEC490	
Semester/Year:	Annual	
First semester/fifth stage Rabaa/ 2024-2025		
Date this description was prepared:	2024/9/1	
Available attendance forms:	In person	
Number of study hours (total)/number of units (total):	6	
2 theoretical hours / 3 practical hours (5 hours) / 3.5 units		
Name of the course administrator (if more than one name is mentioned):	Dr:Muna Abdal Oader Eman Faisal Mohammad	
Course objectives:		
<p>Enabling the student to learn about natural resources, their types and their importance •  powering the studentTo exploit Natural ResourcesIn an optimal way and explain its •  uses</p> <p>Enable the student to recognizeOn land, human and water resources •  powering the studentTo learn about waysPreserving these resources and the demand and •  supply for them</p>		
Teaching and Learning strategies:		
 <ul style="list-style-type: none"> <li>- Interactive lecture</li> <li>- Brainstorming</li> <li>- Dialogue and discussion</li> <li>- Field Training</li> <li>- Practical exercises</li> <li>- Field project</li> <li>- Self-education</li> </ul>		
Course structure:		

Evaluation method	Teaching method	Name of the unit/topic	Required learning outcomes	hours	the week

Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Research methods in economic resources	A1: Learn about the methods and methods used to study and explore economic resources	2Theoretical	1
Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self-learning	The importance of the reasons for studying it Geological depletion Economic depletion	A2:Learn about the concept of natural resources	3Practical	
Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Characteristics of economic Resources - Classification of economic resources	B1: Explains the characteristics of economic resources C1: Enumerates resource classifications	2Theoretical	2
Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Basic functionsFor Earth	A3: Enumerates the functions of the earth	practical	
Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Economics of land resources - concepts and characteristics of land - uses of land - use capacity - best use of land	A4:Learn how to use the land C2Determine the best methods to use	2	
Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Light cutting and advantages of light farming Dense reduction and the advantages of dense agriculture The difference between a dense border and a light border	C3:Compare between the dense border and the light border	practical	3
Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and	Land use density - factors InfluentialIn the density of land use -	A5:Understands how population density is distributed	theoretic al	4

	discussion, self-learning		A6He knows how to plan to distribute resources fairly		
Semester exam 1, final exam	Interactive lecture, brainstormin g, dialogue and discussion, self-learning	Economic supply response For land due to changing demand	B2:Explains the economic offer	Practical	
Semester exam 1, final exam	Interactive lecture, brainstormin g, dialogue and discussion, self-learning	Display of land resources - concept of land - natural supply - economic supply - . Means of increasing the economic supply of land	B3:YimmigBetween n the natural and economic supply of the land C4Compares the different options available for land use	theoretic al	5
Semester exam 1, final exam	Interactive lecture, brainstormin g, dialogue and discussion, self-learning	A graph of supply and demand from society's point of view and how equilibrium is achieved	B4:Explains the theory of supply and demand in selling from society's point of view	practical	
Semester exam 1, final exam	Interactive lecture, brainstormin g, dialogue and discussion, self-learning	Land rent - characteristics of rent - types of agricultural land rent - Theories of rent - the economic and social importance of rent	B5:He knows the definition of rent C5It shows the types of rent	theoretic al	6
Semester exam 1, final exam	Interactive lecture, brainstormin g, dialogue and discussion, self-learning	A graph of supply and demand from an individual's point of view and how equilibrium is achieved	B6:Explains the theory of supply and demand in selling from the individual's point of view	practical	
Semester exam	Semester exam	Semester exam	Semester exam	2	7
Semester exam 1, final exam	Interactive lecture, brainstormin g, dialogue and discussion, self-learning	Traditional resources, their types and features, and unconventional resources, their types and features	C6: Compares traditional and non- traditional German resources	practical	



Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Evaluation of agricultural land resources - evaluation requirements - factors affecting the value of land - Earth straightening methods	B7: It is clear Factors affecting agricultural land values C7Methods of evaluating land, how to use it, and determining the best ways to use the land	theoretical	8
Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Diagram of the water balance and means of maintaining the quantity and quality of water resources	B8:It shows the balance between supply and demand for water	practical	
Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Tenure of agricultural land resources - the concept of agricultural tenure - types of tenure -.	The concept of tenure explains the factors influencing the use of land C8:And evaluate the effectiveness of agricultural policies	theoretical	9
Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Strong and weak condition for sustainable development	C9:Compares the strong and weak condition for sustainable development	practical	
Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Characteristics of land tenure – Importance of land tenure resources- Lands of the Arab world countries-Arable lands For agricultureThe floorArab agricultural -	C10Determines the needs of the farmer And he plans to make plans for development of the agricultural sector	theoretical	10
Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Natural capital stock stability chart	B9:It shows the stability of the natural capital stock	practical	
Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Agricultural land resources in Iraq - divisions of Iraqi	A7:Knows terrestrial resources Its types and	theoretical	11

	and discussion, self-learning	lands - per capita share of arable land	importance And understanding the challenges facing agriculture in Iraq		
Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self-learning	The optimal point and future justifications for achieving it	B10:It shows the optimum point for the size of the capital stock	Practical	
Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Economics of human resources - population size - population size and economic activity - population density -	A8::Understands the importance of human resources, analyzing decisions and developing management skills	theoretical	
Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Supplier of capital and its sources	B11:Explains capital resources	practical	12
Semester exam	Semester exam	Semester exam	Semester exam	Semester exam	13
Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Characteristics of human resources management	B12:Explains human resources management	practical	
Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Agricultural workforce - human resources in Iraq.	A9:Recognize definitionsbasics related to itIt helps develop workforce skills	theoretical	14
Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Characteristics of capital resources	B13:Shows intellectual capital	practical	
Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and	Economics of water resources - the importance of water resources - sources of water resources in Iraq - fish wealth	B14Knows water resources, their importance, and their distribution sources	theoretical	15

	discussion, self-learning			
Semester exam 1, final exam	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Examples of capital resources	B15: Gives examples of capital resources	Practical

Course evaluation				
Relative weight%	Class	Calendar date (week)	Calendar methods	
52.	52.	the third week	Short test(1 Quiz)	
20	20	the sixth week	Theoretical semester test	
2.5	2.5	The ninth week	Short test(Quiz2))	
40	40	Final semester exam	Final theoretical test	
2.5	2.5	The first week	A short practical test(1) Quiz	
5.2	2.5	fourth week	A short practical test(2) Quiz	
10	10	the sixth week	Practical semester test	
20	20	Final semester exams	Final practical test	
100%	100%			the total

Learning and teaching resources	Required textbooks (methodology, if any)
and economics and reform agricultural, Dr. Abdul Khaleq Muhammad	

Main references (sources)
e Economics of Agrarian Reform, Dr. Abdul Wahab Matar Al-Dahri conomics of Natural and Environmental resources. Dr. Hamad bin Muhammad Al-Sheikh nothing

Recommended supporting books and references (scientific journals, reports....)
Electronic references, Internet sites

Theoretical subject teacher
muna Abdel Qader Ahmed

Practical subject teacher
Eman Faisal Mohammad

Head of the Agricultural Economics Department
prof Dr.Alaa Abdullah

Chairman of the Scientific Committee
Prof.Dr.Alaa Abdullah

## Course Description Form Labor economy

Course name:	1.	Labor economy
Course code:	2.	WOEC495
the chapter/year:	3.	the chapter the second 2024-2025
Date this description was prepared:	4.	2025 /2/1
available attendance forms:	5.	My presence+ ELECTRONIC
Number of study hours (total):	6.	Number of units (total): (45hour /3)online
Name of the course administrator (if more than one name is mentioned):	7.	Dr. M. Sara Sael AbdelEmail:sura84@uomosul.edu.iq
Course objectives:		8.
Enabling the student to understand and comprehend what is related to Labor economics Enabling the student to know Labor demand and labor supply Enabling the student to know the types of unemployment and how to address them Student empowermentKnowing the business decision theory The student canTo recognize the full use and its relationship to production		
Teaching and learning strategies:		



The eraser DRInteractive

golden stormNew

Dialogue and discussion

Assignment and report

OffersFor market models and brokers

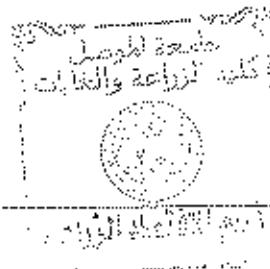
- He is assigned to prepare a report entitled "From His Efforts" and prepare it for discussion with Students

## 10. Headquarter structure

Evaluation method	Learning method	Name of unit or topic	Required learning outcomes	lectures	week
Short exams, homework, discussions	Methods Auditory writing style on the board and direct dialogue style	Principles of Labor Economics	A1He knows concept of Labor economics its importance to the producer and the consumer	theoretical 2	1
Short exams, homework assignments, discussions	Methods Auditory writing style on the board and direct dialogue style	Demand for work	B1 shows the demand for labor in a perfectly competitive market	theoretical 2	2

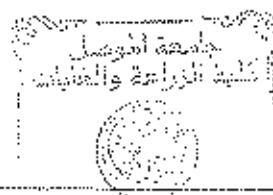
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Original document  
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Short exams, homework assignments, discussions	Methods Auditory writing style on the board and direct dialogue style	Demand for work	B2 Explains the demand for labor in the short and long term.	theoretical 2   3
Short exams, homework assignments, discussions	Methods Auditory writing style on the board and direct dialogue style	Unemployment and full employment	B3 Explains the types of unemployment and treatments and in which societies it is most prevalent.	theoretical 2   4
Short exams, homework assignments, discussions	Methods Auditory writing style on the board and direct dialogue style	Business decision theory	B4 explains Labor demand elasticities and factors affecting them	theoretical 2   5
Short exams, homework assignments, discussions	Methods Auditory writing style on the board and direct dialogue style	Types of flexibility	A2 Get to know Hicks and Marshall's laws of derived demand	theoretical 2   6



Short exams, homework assignments, discussions	My theory: Methods Auditory writing style on the board and direct dialogue style	ExplainsJob offer	B5 explainsDeterminants of job offer and job offer format	theoretical 2	7
Short exams, homework assignments, discussions	Methods Auditory writing style on the board and direct dialogue style	Explains the distribution of available time between rest and work	B6 Explains the business decision theory.	theoretical 2	8

Short exams, homework assignments, discussions	Methods Auditory writing style on the board and direct dialogue style	ExplainsWorker balance and choice between work and rest	B7 Explain the graphical analysis of business decision theory.	theoretical 2	9
Short exams, homework assignments, discussions	Methods Auditory writing style on the board and direct dialogue style	Applies both production and demand curves.	C1 applies both production and demand curves.	theoretical 2	10



Short exams, homework assignments, discussions	Methods Auditory writing style on the board and direct dialogue style	Applies to laws and elasticity of demand	C2 applies to the laws and elasticity of demand.	theoretical 2	11
Short exams, homework assignments, discussions	Methods Auditory writing style on the board and direct dialogue style	Explains Benefits of full use	B8 Explains the advantages and benefits of full use.	theoretical 2	12

Short exams, homework assignments, discussions	My theory: Methods Auditory writing style on the board and direct dialogue style	Report and discussion	C3 applies to the laws and elasticities of supply	theoretical
Short exams, homework assignments, discussions	Methods Auditory writing style on the board and direct dialogue style	He knows Unemployment and its types	A3 unemployment	theoretical

Short exams, homework assignments, discussions	Methods Auditory writing style on the board and direct dialogue style	Explains the meaning Unemployment, its types, causes and treatments	A4 It is mentioned meaning Unemployment, its causes and how to address it	theoretical
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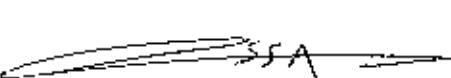
### 11. Course Evaluation

Relative weight%	degree	Calendar date (week)	Evaluation method
13%	10 theoretical	My theory of the week 1-15	Final theoretical report
6%	5 theoretical	week )3(	Short test 1 (Quiz)
15%	20 theoretical	week )9(	Midterm exam Midterm Exam) Theoretical
6%	5 theoretical	week )12(	Short test 2 (Quiz)
%60	60	Theoretical exam week	Final theoretical exam
100%	100		the total

### 12. Learning and teaching resources

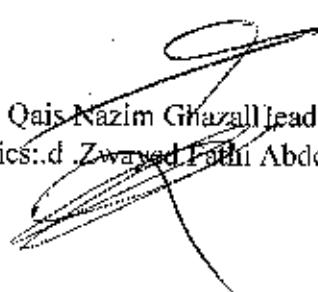
Dr. Abdul Rasool Abdul J

Dr. Alaa Shafiq Al-Rawi, Second Edition



teacher And Theoretical material Dr. Sara Sael Abdell

Chairman of the Scientific Committee: Prof. Dr. Qais Nazim Ghazali [head of Department agricultural economics] d. Zayed Fahmi Abdell



## Course description form

1. : Course name	Agricultural Development Agricultural development
2. Code Course	Code AGDHE488 MIET248
3. Semester/Year	2025-2024
4. Date this description was prepared	1/9/2024
5. Attendance Available forms of	My presence
6. (Number of study hours (total)/number of units (total))	Theoretical hours are 45 hours : Number of units 3 units
7. Name of the course administrator (if more than one name is mentioned)	Emil Alaa Muhammad: ala.mohammed58@uomosul.edu.iq
<b>8. objectives Course</b>	(theoretical)

The Department of Agricultural Economics, through its educational programs and academic being of -vocabulary, aims to prepare agricultural cadres capable of knowing the activities and wells to agricultural problems. those in the agricultural profession and finding appropriate solutions. Agriculture, in both its plant and animal aspects, is an integral part of the economic activities in the country and cannot be separated from those activities. The general direction of the department is to keep pace with the reality of the agricultural sector, both plant and animal, in its qualify them to advance educational programs by teaching them the nature of the factors that control agricultural production. The goals that the . and economic development, especially development of the agricultural sector department seeks to achieve are considered consistent with the general goals of the college and the rest of the departments, to be complementary to these or the rest of the other fields of knowledge specializations, which in the end are representative of the directions and in the various agricultural specialties of the remaining scientific departments in preparing their graduates . And work to keep pace with what is happening What is hap .and sustainable development, which is where the hour is scientific development in agricultural economics in countries of the world and comparing study programs with their counterparts accredited in international universities, taking into account that theoretical lessons are vocabulary of each one complements the other. And closely linked to practical lessons and that the vocabulary and development lessons, their goals and the working to provide all the requirements for scientific strategy for advancing the reality of the agricultural sector from By achieving both growth and development economic development

### 9. Teaching and learning strategies

<b>The strategy</b>	<p>The interactive lecture, brainstorming, dialogue and discussion introduces the student to the concept of economic development and indicators of underdevelopment.</p> <p>discussion, the student learns Interactive lecture, brainstorming, dialogue and about the features (characteristics) of agricultural economic backwardness</p> <p>The interactive lecture, brainstorming, dialogue and discussion show the student</p>
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what the obstacles to agricultural economic development are

ve lecture, brainstorming, dialogue and discussion shows the student Interactive economic growth

Interactive lecture, brainstorming, dialogue and discussion of economic growth models

Interactive lecture, brainstorming, dialogue and discussion introduces the agriculture and development theories student to

Interactive lecture, brainstorming, dialogue and discussion explain to the student the elements of economic development

Through interactive lecture, brainstorming, dialogue and discussion, students of agricultural transformation in economic development learn about the role

Interactive lecture, brainstorming, dialogue and discussion of agricultural development strategies

Interactive lecture, brainstorming, dialogue and discussion shows students testing agricultural development programs and assignments and reports on projects

Interactive lecture, brainstorming, dialogue and discussion on the role of finance in economic development

Interactive lecture, brainstorming, dialogue and discussion Population growth agricultural commodities and demand for

Interactive lecture, brainstorming, dialogue and discussion on the role of prices and policies in developing the agricultural sector

The interactive lecture, brainstorming, dialogue and discussion shows students ral economic integrationthe Arab agricultu

The interactive lecture, brainstorming, dialogue and discussion illustrate Arab integration

#### 10. Course structure

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	hours	the week
Short exams Assignment of duty discussions	Audition method and Style of writing on the blackboard: <b>Recognizing the forms of development- the difference -development Economic Assigning tasks and reporting</b>	Principles development Importance Principles development Recognizing the forms of development- the difference -development Economic between Development and economic growth	The student A1 the learns about concept of economic development Explains to the B1 student the goals of economic development	3 Theoretical	1
Short exams	<b>Characteristics of agriculture in developing</b>		The student B2	3	2

Assignment of duty discussions	Style of writing on the blackboard Characteristics of agriculture in Arab countries Direct dialogue style Assigning tasks and reporting <b>Characteristics of the Iraqi agricultural sector</b>	countries the explains features characteristics of ) agricultural economic backwardness	Theoretical		
Short exams Assignment of duty discussions	Share on the blackboard most important challenges facing economical development Style of writing on the blackboard Obstacles statement of the most important facing economical development Direct dialogue style Assigning tasks and reporting	Introducing A2 student to what are the obstacles to agricultural economic development	3 Theoretical	3	
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Explaining the most important factors that affect economic growth Identify the causes of economic growth	3 Theoretical	4	
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Harrod models Domar models	The student B5 evaluates models of economic growth models of economic growth	3 Theoretical	5
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Keynesian conditions for economic development Theories of the German school	Explains to the B6 agriculture student and development theories	3 Theoretical	6
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	R Kla Sh Theory in K R	Explains to the B7 Elements of student economic development	3 Theoretical	7
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Development theories- <b>Elements of economic development -</b>	Explains to the B8 the role of student agricultural transformation in economic development	3 Theoretical	8
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard style Direct dialogue Assigning tasks and reporting	The role of agriculture in economic development Characteristics of agriculture in agricultural development	Explains to the B9 agricultural student development strategies	3 Theoretical	9

Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks	economy Free strategies policy Economic strategies policy Marketing strategies	recognizes A3 are Students assigned tasks and report on testing agricultural development programs and projects	3 Theoretical	10
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Distribution of productive resources and selection between products	The student A5 the learns about role of finance in economic development	3 Theoretical	11
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Technical change financing needs Sources of agricultural financing Financial resources available for development	student The A5 recognizes Population growth and demand for agricultural commodities How to know C 9 the sources of agricultural financing financial How B 11 resources are available for development	3 Theoretical	12
Short exams Assignment of duty discussions	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Economic impacts of population growth Population growth theories Scientific visit	Explains to the B 12 the role of student prices and policies in developing the agricultural sector Form of C 10 theories of population growth	3 Theoretical	13
Short exams Assignment of duty discussions	methods Auditory Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Impact of natural resources The impact of technical capital Price uncertainty	Explains to the B 13 the Arab student agricultural economic integration	3 Theoretical	14
Short exams Assignment of duty discussions	Auditory methods Writing style on Direct the blackboard dialogue style Assigning tasks and reporting	Introducing the student to the Arab importance of integration Goals of joint Arab integration	is assigned to B 14 for the student Arabic integration	3 Theoretical	15



II-Course evaluation				
Relative weight %	Class	Calendar a week -appointment	Calendar methods	T
5	5	15-1 My theory week	Final theoretical report +	1
10	5 5	Week 3	Quiz Short test 1	2
15	10 5	Week 9	Midterm test Theoretical and practical	3
10	5 5	Week 12	Short test 2 Quiz	4
60	60	A week of theoretical exam	Final theoretical test	
100	100		the total	

#### Learning and teaching resources -12

Zubair-Agricultural development: Dr. Abdullah Ali Al

Najafi-Agricultural development: Dr. Salem Tawfiq Al

Theoretical subject teacher

Mr. Dr. Alaa Muhammad

Head of the Agricultural Economics Department Chairman of the Scientific Committee

Prof. Dr. Alaa Muhammad Abdullah ,Mr. Dr . Alaa Muhammad Abdullah

