

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



Academic Program and Course Description Guide

2026

Introduction:

The educational program is a well-planned set of courses that include procedures and experiences arranged in the form of an academic syllabus. Its main goal is to improve and build graduates' skills so they are ready for the job market. The program is reviewed and evaluated every year through internal or external audit procedures and programs like the External Examiner Program.

The academic program description is a short summary of the main features of the program and its courses. It shows what skills students are working to develop based on the program's goals. This description is very important because it is the main part of getting the program accredited, and it is written by the teaching staff together under the supervision of scientific committees in the scientific departments.

This guide, in its second version, includes a description of the academic program after updating the subjects and paragraphs of the previous guide in light of the updates and developments of the educational system in Iraq, which included the description of the academic program in its traditional form (annual, quarterly), as well as the adoption of the academic program description circulated according to the letter of the Department of Studies T 3/2906 on 3/5/2023 regarding the programs that adopt the Bologna Process as the basis for their work.

In this regard, we can only emphasize the importance of writing an academic programs and course description to ensure the proper functioning of the educational process.

Concepts and terminology:

Academic Program Description: The academic program description provides a brief summary of its vision, mission and objectives, including an accurate description of the targeted learning outcomes according to specific learning strategies.

Course Description: Provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the students to achieve, proving whether they have made the most of the available learning opportunities. It is derived from the program description.

Program Vision: An ambitious picture for the future of the academic program to be sophisticated, inspiring, stimulating, realistic and applicable.

Program Mission: Briefly outlines the objectives and activities necessary to achieve them and defines the program's development paths and directions.

Program Objectives: They are statements that describe what the academic program intends to achieve within a specific period of time and are measurable and observable.

Curriculum Structure: All courses / subjects included in the academic program according to the approved learning system (quarterly, annual, Bologna Process) whether it is a requirement (ministry, university, college and scientific department) with the number of credit hours.

Learning Outcomes: A compatible set of knowledge, skills and values acquired by students after the successful completion of the academic program and must determine the learning outcomes of each course in a way that achieves the objectives of the program.

Teaching and learning strategies: They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra-curricular activities to achieve the learning outcomes of the program.

Academic Program Description Form

University Name **University Of Basrah**

Faculty / Institute **College Of Agriculture**

Scientific Department **Department of Field Crops**

Academic or Professional Program Name **Field Crops**

Final Certificate Name **Bachelors in Field Crops**

Academic System **Semester System**

Description Preparation Date **10 June 2026**

File Completion Date **21 June 2026**



Head of Department Name

Asst. Dr. Khawla Rashige Hassan

Date 21 June 2026



Scientific Associate Name

Prof Dr. Sadiq Jabar Muhsin

21 June 2026

Signature



This File Is Checked By Prof Dr. Aqeel Abbod Suhaim

Department of Quality Assurance and University Performance

Director of The Department Of Quality Assurance and University Performance

Date 21 June 2026



Prof Dr Sarmad Ghazi Mohammed

Approval of The Dean

1. Program Vision

The Field Crops Department seeks to advance and excel, prepares the process of scientific and technical progress, and provides scientific and practical consultations for investment projects.

2. Program Mission

. Preparing qualified professors and agricultural engineers in the field of field crops who are up to date with the needs of the labor market and implementing the system of environmental preservation and community service by encouraging professors to .follow modern agricultural methods

3. Program Objectives

Improving the scientific level of the department, students and faculty
Providing a better teaching climate for students and teachers
Providing appropriate opportunities to meet the department's need for scientific competencies
Improvement and expansion in response to the labor market and community service

4. Program Accreditation

Does the program have program accreditation? And from which agency Yes / National Council for the Accreditation of Agriculture College Programs?

5. Other External Influences Ministry of Higher Education and Scientific Research

Is there a sponsor for the program? Opportunities for support are available

6. Program Structure

Program Structure	Number of Courses	Credit Hours	Percentage	Reviews*
Institution Requirements	8	16	50	

College Requirements	10	30	31.5	
Department Requirements	33	115.5	28	
Summer Training	-	-	100	
Others				

*

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

7. Program Description				
Year/Level	Course Code	Course Name	Credit Hours	
First stage First Semester	ANCH121	Analytical Chemistry	3	2
	MATH111	Mathematics	-	3
	FICR115	Principles of Field Crops	3	2
	UOB104	Democracy and Human Rights	-	2
	ANPR123	Principles of animal production	3	2
	UOB102	English language1	-	2
First stage Second Semester				
	AGEC129	Agricultural Economy	3	2
	ENDR117	Engineering Drawing	3	-
	COMP101	Application of Computer /1	-	2

	PLSU118	Plane Survey	3	1
	SOIL114	Principles of soil	3	2
	UOB101	Arabic	-	2
Second stage First Semester				
	HORT216	Horticulture Science	3	2
	CMHE207	Agricultural machines and Equipment	3	2
	UOB205	Baath Crimes	-	2
	SFNM206	Fertilizer and soil fertility	3	2
	UOB202	English language 2	-	2
	BOTY228	Botany	2	-
Second stage Second Semester				
	UOB203	applications of computer 2	2	1
	OSCR214	Oil and sugar crops	3	2
	STAT224	General Statistics	3	2
	PLEC212	Plant ecology	3	2

	IRDR215	Irrigation and Drainage	3	2

8. Expected Learning Outcomes of Program	
Knowledge	
Learning Outcomes A- Cognitive objectives Knowing the theories related to different field .crops 2-Understanding methods of growing field crops .and methods of field management 3.Knowledge of scientific problem-solving skills 4 - Enabling the student to understand the conversation about field crop sciences and equipping various relevant departments with specialized scientific cadres	Building a detailed base on the department's staff and their activities and preparing plans for accepting primary and postgraduate studies Preparing scientific and technical staff to occupy administrative and scientific positions in the Iraqi agricultural sector Training students to acquire applied agricultural experiences in addition to applied theoretical foundations
Skills	

1.-Field crop technology and seed technology 2.-Technology of reclamation and soil preparation for agriculture 3-Fertilization technology, crop service, combating weeds and agricultural pests, harvesting, animal production, and food .processing 4- Irrigation and drainage engineering technology.	. Introducing students to the various agricultural operations in agriculture and how to conduct them Preparing agricultural cadres capable of caring for field crop plants, spreading their cultivation, and how to sustain the cultivated areas. Qualifying them to advance the crops that the department is interested in addressing in its study programs
Ethics	
1-Asking questions and answering them in the classroom 2-Defining the problem and its solution 3-Learn the correct ways of thinking 4- A case study in graduation research and how to solve it	Finding solutions to the problems and obstacles that students encounter in the theoretical and practical parts of the subject and finding solutions to them Enabling students to solve the largest number of exercises and applications on topics Asking students inferential questions

9. Teaching and Learning Strategies

-Lectures
- Seminars

Discussions

10. Evaluation Methods

Quarterly tests
Monthly tests-
Homework-

- Graduation research discussion tests

11. Faculty

Faculty Members

Academic Rank	Specialization	Special Requirements/Skills (If Applicable)		Number of Teaching Staff	
	General	Special		Staff	Lecturer
Prof	Soil and water sciences	plant nutrition		2	
Prof.	Horticulture and landscaping	plant nutrition		-	
Prof.	Field crops	Field Crop Physiology		1	
Assist.Prof.	Economic sciences	Economic development		1	
Assist.Prof.	Life science	plant physiology		2	
Assist.Prof.	Horticulture and landscaping	Production of vegetable crops		1	
Assist.Prof.	animal production	Animal feeding		1	

Assist.Prof.	Field crops	Plant Physiology			1	
Assist.Prof.	Field crops	plant breeding			1	
Assist.Prof.	Field crops	Ecology Physiology			2	
Assist.Prof	Soil and water sciences	Soil and water sciences			1	
lecturer	Field crops	Field crops			1	
Lecturer	Field crops	Field crops			5	
lecturer	Field crops	Field crops			1	
lecturer	Field crops	Field crops			-	
lecturer	Physics Science	Laser physics			-	
lecturer	Field crops	Field crops			-	
Ass. lecturer	Field crops	Field crops			-	
Ass. Lecturer	Field crops	Field crops			3	
Ass. Lecturer	Field crops	Field crops			-	

Professional Development
Monitoring New Faculty Members
Focus on developing personal capabilities through continuous and active participation in general and specialized courses and workshops Focus on self-development in the field of classroom management and student guidance through mutual interaction in lectures
Professional Development for Faculty Members

By following modern teaching methods, reviewing websites, and keeping pace with developments to learn about new research.

12. Acceptance Criterion

**Developing regulations related to admission to the college or institute, whether)
(central admission or others mentioned**

Central admission – for morning studies

Direct application for evening studies - according to grade and competition

13. The Most Important Sources of Information About The Program

From methodological books, help books, the Internet, and scientific research

14. Program Development Plan

**Continuous training of special skills and their application in scientific and practical fields
Practice using learning and teaching methods in all specialized fields**

Program Skills outline															
				Required Program Learning Outcomes											
Year/ Level	Course Code	Course Name	Basic or Optional	Knowledge				Skills				Ethics			
1	ANCH121	Analytical	Basic	A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
1	ANPR123	Principles of	Basic	√	√		√	√		√		√	√	√	√
1	FICR115	Principles of	Basic	√	√	√	√	√		√		√	√	√	√
1	UOB104	Democracy and	Basic	√		√	√	√		√		√	√	√	√
1	MATH111	Mathematics	Basic	√		√	√	√		√		√	√	√	√
1	PLSU118	Plane Survey	Basic	√	√	√	√	√				√	√	√	√
1	SOIL114	Principles of soil	Basic	√	√		√	√		√		√	√	√	√
1	ENDR117	Engineering Drawing	Basic	√	√	√	√		√	√		√	√	√	√
1	UOB101	Arabic language	Basic	√	√		√	√		√					
1	UOB102	English language	Basic	√	√	√	√	√		√		√	√	√	√
1	COMP101	applications of Comput	Basic	√	√	√	√	√		√		√	√	√	√
1	AGEC129	Agricultural Econom	Basic	√	√	√		√		√		√	√	√	√
2	HORT216	Principles of	Basic	√	√	√	√	√		√		√	√	√	√
2	CMHE207	Agricultural machines and Equipm	Basic	√	√	√	√	√		√		√	√	√	√
2	SFNM206	Fertilizer and soil	Basic	√	√	√	√	√	√	√		√	√	√	√

2	UOB203	Applications of Computer /2	Basic	√	√	√	√	√	√	√		√	√	√	√
2	UOB202	English language 2	Basic	√	√	√	√	√	√	√		√	√	√	√
2	OSCR214	Oil and sugar	Basic	√	√	√	√	√	√	√		√	√	√	√
2	STAT224	General Statistic	Basic	√	√	√	√	√	√	√		√	√	√	√
2	PLEC212	Plant Ecology	Basic	√	√	√	√	√	√	√		√	√	√	√
2	IRDR215	Irrigation and	Basic	√	√	√	√	√	√	√		√	√	√	√
2	COMP203	Applications of Computer	Basic	√	√	√	√	√	√	√		√	√	√	√
2	UOB205	Baath party	Basic	√	√	√	√	√	√	√		√	√	√	√

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information					
معلومات المادة الدراسية					
Module Title	English Language		Module Delivery		
Module Type	Core		☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar		
Module Code	UOB102				
ECTS Credits	2				
SWL (hr/sem)	32				
Module Level		UGx11 1	Semester of Delivery		1

Administering Department		Type Dept. Code	College	Type College Code	
Module Leader	Name		e-mail	E-mail	
Module Leader's Acad. Title		Professor	Module Leader's Qualification		Ph.D.
Module Tutor	Name (if available)		e-mail	E-mail	
Peer Reviewer Name		Name	e-mail	E-mail	
Scientific Committee Approval Date			Version Number		

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module		None	Semester
Co-requisites module		None	Semester

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	1. Enabling Students to Access Scientific References: Learning English includes the ability to read and understand important research and studies in the field of agriculture, which enhances students' ability to benefit from these sources in their academic studies. 2. Improving Scientific Communication Opportunities: Learning English allows students to communicate with international scientists and researchers, and to participate effectively in conferences and workshops that are often conducted in English.

	3. Enhancing Scientific Writing Skills: Learning English helps students write reports and scientific papers professionally, which is essential for publishing their work in international scientific journals. 4. Utilizing Online Educational Resources: Learning English enables students to access training courses and agricultural curricula available online, which are often in English, thereby enhancing their educational opportunities. 5. Enhancing Employment Opportunities: Mastery of English is a key skill that opens up wide job opportunities in the global market, especially in fields such as agriculture and project management. It also allows graduates to benefit from modern technological applications
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	• Understanding Terminology: Ability to recognize and understand the terminology used in the agricultural sector. • Utilizing Modern Technologies: Ability to leverage and apply modern technologies in the agricultural field through the use of language skills. • Effective Communication: Ability to communicate and interact with diverse environments within the agricultural sector. • Applying Language Skills in the Job Market: Ability to use language skills to enter various job markets related to agriculture, facilitating connections between different disciplinary.
Indicative Contents المحتويات الإرشادية	Introduction to Agricultural Terminology • Common agricultural terms and jargon. • Vocabulary related to plant biology, soil science, pest management, and crop production. Reading and Understanding Scientific Literature • Techniques for reading scientific papers and reports. • How to interpret graphs, charts, and tables in agricultural studies. • Summarizing and critiquing research articles.

	Understanding and Using Agricultural Data • Analyzing and interpreting data related to agriculture. • Writing about statistical results and research findings. • Using language to explain complex data to non-specialists. Employment and Career Development • Crafting CVs and cover letters for agricultural positions. • Preparing for job interviews in English. • Networking and professional growth in the global agricultural sector.

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	Type something like: The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, interactive tutorials and by considering types of simple experiments involving some sampling activities that are interesting to the students.

Student Workload (SWL) الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	109	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا	7
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	91	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا	6
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل	200		

Module Evaluation					
تقييم المادة الدراسية					
As		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuou s	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
Week	Material Covered
Week 1	Agricultural Definition
Week 2	Agricultural Definition and terminology
Week 3	Tillage Definition and requirements
Week 4	Irrigation general view
Week 5	Irrigation methods
Week 6	Fertilizers general view
Week 7	Mid-term Exam
Week 8	Fertilizers types- comparison between all types
Week 9	Symptoms of element deficiency in plants
Week 10	Hydroponic systems
Week 11	Hydroponic systems
Week 12	Hydroponic systems
Week 13	Plant parts
Week 14	Plant parts

Week 15	Plant parts and functions Learning and Teaching Resources	
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Oxford dictionary of agriculture and land management.	NO
Recommended Texts	gibsonburgagdept.weebly.com/uploads/2/3/5/5/23557960/plant_structure_and_functions_of_plants_-_pkt.pdf	No
Websites		

Delivery Plan (Weekly Lab. Syllabus)	
المنهاج الاسبوعي للمختبر	
Week	Material Covered
Week 1	
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	

Grading Scheme				
مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A – Excellent	امتياز	90 – 100	Outstanding Performance
	B - Very Good	جيد جدا	80 – 89	Above average with some errors
	C – Good	جيد	70 – 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 – 69	Fair but with major shortcomings

	E – Sufficient	مقبول	50 – 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information				
معلومات المادة الدراسية				
Module Title	Democracy and Human rights		Module Delivery	
Module Type			☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar	
Module Code	UOB 104			
ECTS Credits	2			
SWL (hr/sem)	32			
Module Level	UGx11	1	Semester of Delivery	1
Administering Department	Type Dept. Code	College	Type College Code	
Module Leader	Name : Ibadi ahmed Ibadi		e-mail	E-mail: Ibadi.ahmed@uobasrah.edu.iq

Module Leader's Acad. Title		Module Leader's Qualification	
Module Tutor	Name (if available)	e-mail	E-mail
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date		Version Number	

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	1- Focusing on the fact that rights and freedoms are an integrated theory that has developed throughout the eras of history, and has gone through historical turning points and events that were embodied after a conflict between two trends. The first is based on the foundations that authority is an end and individualism is to serve the legal system in order to achieve its interests. This naturally focuses on restricting freedoms and rights. 2- Focusing on the fact that the individual is a goal and that authority and the state achieve the individual's goal is a matter that occupied thought, leading to the laws embodying the idea of rights and freedoms in their current form and what religions and divine laws have added to it to form a basic source for this content. 3- Trying to convey the idea that the importance of rights education comes from a comprehensive and continuous process targeting all peoples and nations and working to consolidate the fulfillment of rights and duties through education, training and media.
Module Learning Outcomes	Introducing students to human rights and its concept. Introducing students to the characteristics and types of human rights Students' knowledge of the idea of human rights in history

مخرجات التعلم للمادة الدراسية	Introducing students to the history of human rights Students' knowledge of the historical development of the idea of human rights Introducing students to the intellectual contribution to human rights A detailed explanation of the intellectual contribution to human rights Definition of types of rights Explain and clarify the types of public freedoms Introducing students to international human rights agreements A detailed explanation of the position of some international agreements Introducing students to democracy Introducing students to human rights in regional documents
Indicative Contents المحتويات الإرشادية	

Learning and Teaching Strategies	
استراتيجيات التعلم والتعليم	
Strategies	The lesson includes two theoretical hours, the number of hours per week distributed over 15 weeks.

Student Workload (SWL)			
الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem)		Structured SWL (h/w)	
الحمل الدراسي المنتظم للطلاب خلال الفصل		الحمل الدراسي المنتظم للطلاب أسبوعيا	
Unstructured SWL (h/sem)		Unstructured SWL (h/w)	
الحمل الدراسي غير المنتظم للطلاب خلال الفصل		الحمل الدراسي غير المنتظم للطلاب أسبوعيا	
Total SWL (h/sem)			
الحمل الدراسي الكلي للطلاب خلال الفصل			

Module Evaluation					
تقييم المادة الدراسية					
As		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
Week	Material Covered
Week 1	Human rights and its concepts
Week 2	Characteristics and types
Week 3	The historical development of the idea of human rights according to divine religions
Week 4	The historical development of the idea of human rights among ancient civilizations
Week 5	The historical development of the idea of human rights, in the contemporary period
Week 6	Intellectual contribution to the development of the idea of human rights in the West

Delivery Plan (Weekly Lab. Syllabus)	
المنهاج الاسبوعي للمختبر	
Week	Material Covered
Week 1	

Week 7	First-month exam
Week 8	Intellectual contribution to the development of the idea of human rights among Arabs
Week 9	Types of rights
Week 10	Types and public freedoms
Week 11	The position of some international agreements on human rights
Week 12	The position of some international agreements on human rights
Week 13	Democracy and public freedoms
Week 14	Human rights in declarations of rights and regional documents
Week 15	Second month exam

Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	The emergence of the theory of public rights and freedoms	The emergence of the theory of public rights and freedoms
Recommended Texts	Public freedoms and human rights, Dr. Muhammad Saeed A collection of international documents on human rights issued by the United Nations Public freedoms in contemporary constitutional systems / Dr. Karim Youssef Kashakesh The importance of human rights in the Third World / Basil Youssef	Public freedoms and human rights, Dr. Muhammad Saeed A collection of international documents on human rights issued by the United Nations Public freedoms in contemporary constitutional systems / Dr. Karim Youssef Kashakesh The importance of human rights in the Third World / Basil Youssef
Websites	Scientific journals	

Grading Scheme				
مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 – 89	Above average with some errors
	C – Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information						
معلومات المادة الدراسية						
Module Title	Field Crops		Module Delivery			
Module Type	Core		☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar			
Module Code	FICR115					
ECTS Credits	7					
SWL (hr/sem)	78					
Module Level		UGx11 1	Semester of Delivery	1		
Administering Department		Field crops	College	Agriculture		
Module Leader	Dr. kareem hanoon mohson		e-mail	Kareem.Mohson@uobasrah.edu.iq		

Module Leader's Acad. Title		professor	Module Leader's Qualification		Ph.D.
Module Tutor	Dr. kareem hanoon mohson		e-mail	E-mail: Kareem.Mohson@uobasrah.edu.iq	
Peer Reviewer Name		Name	e-mail	E-mail	
Scientific Committee Approval Date		01/05/2026	Version Number		

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None		Semester
Co-requisites module	None		Semester

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	Definition of field crop science, its economic importance, field crops, the most important classifications of field crops, and the impact of environmental conditions on field crop growth. Important agricultural processes in crop production are also introduced. Identify the most important field crops.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1- Defining field crop science, its economic importance, field crops, and their main classifications 2 -Understanding the impact of environmental conditions and their effects on field crops. 3 -Introducing students to seed dormancy and how to eliminate it. 4- Introducing students to the most important weeds prevalent in agricultural fields. 5- The agricultural cycle, its importance and benefits for plants, and how to design it 6- Educating students about cultivated field crops. 7 -Introducing students to the meaning of fertilizers, their types, and how to add fertilizers to crops. 8- Introducing students to biological factors.
Indicative Contents المحتويات الإرشادية	The field crops course covers several main topics: 1 .Definition of field crop science and its economic importance

	2-Field crops and their main classifications 3- .The impact of environmental conditions on field crop growth 4- .Introduction to important agricultural processes in crop production 5-. Crop rotations, the most important weeds prevalent in crop fields, and their impact on crops

Learning and Teaching Strategies	
استراتيجيات التعلم والتعليم	
Strategies	The main teaching strategy for this unit is to encourage students to participate in discussion, as well as a series of lectures and practical lessons designed to introduce them to field crop science. At the same time, their critical thinking skills will be refined and expanded through topics covered in the lectures. Including what are field crops, what is the classification of field crops, what are the appropriate conditions for the growth of field crops, and what are the agricultural processes followed to improve crop growth.

Student Workload (SWL)			
الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem)		Structured SWL (h/w)	
الحمل الدراسي المنتظم للطالب خلال الفصل	75	الحمل الدراسي المنتظم للطالب أسبوعيا	5
Unstructured SWL (h/sem)		Unstructured SWL (h/w)	
الحمل الدراسي غير المنتظم للطالب خلال الفصل	114	الحمل الدراسي غير المنتظم للطالب أسبوعيا	6
Total SWL (h/sem)			200
الحمل الدراسي الكلي للطالب خلال الفصل			

Module Evaluation					
تقييم المادة الدراسية					
As		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	6	15% (5)	Same week 1, 2, 3, 4	Same week 1, 2, 3, 4
	Assignments	6	10% (5)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	5% (10)	Continuou s	All
	Report	6	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
Week	Material Covered
Week 1	The concept of field crops science - divisions of field crops - scientific nomenclature
Week 2	The effect of environmental conditions and temperatures on plant growth and yield
Week 3	The effect of light on plants and photoperiod

Wee k 4	The effect of drought on plant growth and the damage caused by excess water.
Wee k 5	Soil, texture, types of water in the soil, how to infer the presence of salinity in the soil
Wee k 6	Exam 1
Wee k 7	Effect of salinity, how to infer the presence of salinity in the soil,
Wee k 8	Germination of field crop seeds - factors affecting germination -
Wee k 9	Seed dormancy, what causes it, and how to get rid of it
Wee k 10	Definition of jungles, methods of combating them, and the losses they cause
Wee k 11	The agricultural cycle, its importance and benefits for plants, and how to design it
Wee k 12	A field visit to nearby crop fields to learn about plants
Wee k 13	Fertilizers and fertilization - Types of fertilizers -
Wee k 14	Methods of adding fertilizers
Wee k 15	Life factors and studying the relationship between field crops and other organisms
Wee k 16	Exam 2

Delivery Plan (Weekly Lab. Syllabus)	
المنهاج الاسبوعي للمختبر	
Week	Material Covered
Week 1	Lab 1: The concept of field crops science - divisions of field crops - scientific nomenclature
Week 2	Lab 2: Soil service operations - 1 - plowing - benefits of plowing - machines used in the plowing process
Week 3	Lab 3: Soil Service Operations 2- Smoothing 3- Leveling 4- Laser Leveling- Advantages of Land Amendment
Week 4	Lab 4: operations - methods of cultivation - A - method of cultivation according to the method of placing seeds in the soil (in terms of performance). B - The method of cultivation according to the moisture content of the soil when sowing.
Week 5	Lab 5: C - The method of cultivation according to the irrigation system. Advantages and disadvantages of each method
Week 6	Lab 6: Exam 1
Week 7	Lab 7: Crop service operations - hoeing 3- grafting - grafting - planting depth - planting distances
Week 8	Lab 8 Germination of field crop seeds - factors affecting germination - types of germination Calculate the percentage of germination
Week 9	Conducting a laboratory experiment - Requirements and how to conduct germination tests - Writing a report
Week 10	Lab 10: Botanical description of cereal and leguminous crops - display models
Week 11	Lab 11: Botanical description of oil crops and sugar crops - display models
Week 12	Lab 12: A field visit to nearby crop fields to learn about plants
Week 13	Lab 13: (Irrigation and drainage) - Irrigation methods - General benefits for the

	construction of drains
Week 14	Lab 14: Fertilizers and fertilization - types of fertilizers - ways to add fertilizers
Week 15	Harvest - Early and Late Harvest Damage
Week 16	Lab 16: Exam2

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Muhammad Amin Omid Nouri (1986). Principles of Field Crops. Ministry of Higher Education and Scientific Research. University of Basra. College of Agriculture Al-Ansari, Majeed Mohsen et al. (1980). Principles of Field Crops. Ministry of Higher Education and Scientific Research.	Yes
Recommended Texts	Al-Ansari, Majeed Mohsen (1982). Field Crop Production. Ministry of Higher Education and Scientific Research. College of Agriculture, University of Baghdad.	yes
Websites	http://www.cSDL.tamu.edu/FLORA/fsb/fsbfern1.htm http://www.botany.hawaii.edu/faculty/carr/equiset.htm	

Grading Scheme				
مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings

	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information				
معلومات المادة الدراسية				
Module Title	Analytical Chemistry		Module Delivery	
Module Type	Core		☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar	
Module Code	ANCH121			
ECTS Credits	7			
SWL (hr/sem)	78			
Module Level		UGx11 1	Semester of Delivery	
Administering Department		Crops Depratment	College	Agriculture college
Module Leader	Maryam abdulbary		e-mail	mariam.ouraiiby@uobasrah.edu.iq
Module Leader's Acad. Title		Assistant Professor	Module Leader's Qualification	
			Master	
Module Tutor	Maryam abdulbary		e-mail	mariam.ouraiiby@uobasrah.edu.iq
Peer Reviewer Name			e-mail	
Scientific Committee Approval Date			Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	1-Builds the effect of analytical chemistry and types of quantitative analysis methods 2-Uses all analytical chemistry tools 3-Detects errors in chemical analysis, diagnoses its type, reduces its effect in the laboratory, and corrects it statistically
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	The student will be able to: 1-Explain the basics of analytical chemistry and the steps of analysis 2-Compare qualitative and quantitative analysis 3-Know acids and bases with their theories and explain their behaviors 4-Explain volumetric analysis and express weight calculations 5-Express methods of analysis by titration
Indicative Contents المحتويات الإرشادية	1-Scope of Analytical Chemistry: Searches for ever-improving means of measuring the chemical composition of natural and synthetic materials using techniques to identify the substances that may be present in a substance and to determine the exact amounts of the specific substance. 2-Quantitative Analysis: Includes explanation of the technique that uses mathematical and statistical modeling, measurement, and research to understand the behavior 3-acids and bases. 4-Chemical Equilibrium: Refers to the state of a system in which the concentration of reactants and the concentration of products do not change over time.

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies

The modern teaching strategy includes achieving learning objectives in general and teaching chemical concepts in particular, as well as the difficulties students face in understanding and acquiring chemistry concepts, and addressing the difficulties by defining chemistry concepts and helping students acquire the correct chemical concepts..

Student Workload (SWL)

الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	93	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا	6
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	57	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا	4
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل	150		

Module Evaluation

تقييم المادة الدراسية

As		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summ	Midterm	2hr	10% (10)	7	LO #1 - #7

ative assess ment	Exam				
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
Week	Material Covered
Week 1	Introduction to Analytical Chemistry and Equivalent Gravimetry
Week 2	Volumetric analysis - solutions – calculations
Week 3	Methods of expressing concentration (molarity, standard, normality, weight and volume ratio)
Week 4	Acids and bases
Week 5	pH - Degree of ionization
Week 6	First exam
Week 7	Hydrolysis of salts - types of salts
Week 8	Buffered Solutions – Guides
Week 9	Setting the equivalence point
Week 10	Oxidation and reduction corrections
Week 11	Volumetric analysis processes
Week 12	Types of corrections
Week 13	Gravimetric analysis - Gravimetric coefficient
Week 14	Precipitating reagents - post-precipitation

Week 15	Second exam
Week 16	

Delivery Plan (Weekly Lab. Syllabus)	
المنهاج الاسبوعي للمختبر	
Week	Material Covered
Week 1	Laboratory safety and identification of glassware and equipment in analytical chemistry laboratories
Week 2	Determination of hydrochloric acid concentration using a standard solution of sodium carbonate
Week 3	Preparation and titration of sodium hydroxide solution
Week 4	Determine the mixture of carbonates and bicarbonates.
Week 5	The first test
Week 6	Determination of acidity of vinegar
Week 7	Sedimentary correction

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Analytical Chemistry Fundamentals of Analytical Chemistry Principles and Practice of Analytical Chemistry	Yes
Recommended Texts	Modern Analytical Chemistry.	No
Websites		

Grading Scheme				
مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A – Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C – Good	جيد	70 - 79	Sound work with notable errors
	D – Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E – Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (فيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information		
معلومات المادة الدراسية		
Module Title	Animal Production	Module Delivery
Module Type	Core	☒ Theory
Module Code	ANPR123	☐ Lecture
ECTS Credits	7	☒ Lab
SWL (hr/sem)	78	☐ Tutorial

			☐ Practical
			☐ Seminar
Module Level	UGx11 1	Semester of Delivery	One
Administering Department	Animal Production	College	Agriculture
Module Leader	Prof. Dr. Alfred Sulaka Karomy Hana	e-mail	E-mail: alfred.solaka@uobasrah.edu.iq
Module Leader's Acad. Title	Professor	Module Leader's Qualification	Ph.D.
Module Tutor		e-mail	Email
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date	29/05/2026	Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	Enables the student to gain knowledge: 1. The importance of the science of the principles of animal production, which deals in detail with the economic importance of livestock and types of global and local livestock, and their management and care. 2. Studying the types and importance of other farm animals such as buffaloes, sheep and goats, and their management and care.

Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Familiarity with general information about animal production and its economic and nutritional importance. 2. Discuss the factors affecting production efficiency and how to improve it. 3. Explain and clarify the obstacles facing livestock and ways to improve it. 4. Introducing students to livestock, their types, and how to care for them. 5. Introducing students to dual-purpose cattle and local and international sheep and goat breeds. 6. Defining how to establish and care for a flock of sheep and goats. 7. Defining the specifications of global and local buffalo and their different breeds. 8. We are introducing students to the importance of poultry projects and meat and egg production. 9. Providing an overview of Farm animals feed materials and the process for preparing balanced nutritional rations. 10. Explanation and clarification of health programs for animals, how to prevent diseases and ways to improve the health of animals and increase their productivity. 11. A detailed explanation of the importance of raising calves and heifers and providing the necessary needs for their rearing. 12. A detailed description of the reproductive system of cows and a statement of its importance in the reproductive process, and how to increase the reproductive efficiency of the animal and increase the birth rate. 13. Explain animal breeding and improvement programs and discuss the importance of breeding, selection, and exclusion of weak animals. 14. A detailed explanation of the importance of camels and the equine species and how to manage and care for them.
Indicative Contents	Indicative content includes the following. 1. Disseminating the culture of livestock's nutritional and economic importance as a major source of agricultural wealth and having a major

المحتويات الإرشادية	role in the Country's economy. - Following modern methods and techniques in animal management, milking operations, and large animal slaughterhouses. - Teaching students the role of successful management (human factor or the breeder himself) of small and large ruminant fields. - Spreading the culture of benefiting from animal by-products such as manure waste and animal waste, and benefiting from animals in work. - Identifying the types of farm animals and the most important projects related to their breeding. - Solving administrative problems in cattle, sheep, and goat breeding fields.
---------------------	--

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	- Enabling students to think and analyze topics related to the intellectual framework of the Principles of Animal Production subject - Enabling students to think and analyze topics related to animal species and the most important projects related to their breeding. - Enabling students to think and analyze topics related to identifying administrative problems in animal fields and working to address them. - Enabling students to think and analyze to identify the role of management (the role of the human factor or the breeder himself) in the success of animal fields of various types.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	78	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	5
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	97	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	6
Total SWL (h/sem)	175		

Module Evaluation					
تقييم المادة الدراسية					
As		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuou s	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All

الحمل الدراسي الكلي للطلاب خلال الفصل	
---------------------------------------	--

Total assessment	100% (100 Marks)		
-------------------------	-------------------------	--	--

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
Week	Material Covered
Week 1	A general introduction to animal production and its importance.
Week 2	Factors affecting the production efficiency of farm animals.
Week 3	Obstacles facing animal production in Iraq and ways to improve them.
Week 4	Cattle classification - global dairy cows - management and care.
Week 5	Dual-purpose cows - Iraqi cows - International breeds of sheep and goats. First Exam.
Week 6	Establishing and managing a flock of sheep and goats.
Week 7	Buffalo - general characteristics of buffalo - physiological characteristics - breeds of buffalo.
Week 8	Poultry birds - the economic importance of poultry projects- the production of eggs and meat.
Week 9	Nutrition and feed- Preparing animal feed.
Week 10	Health care for agricultural animals. Second Exam.
Week 11	The importance of raising calves and heifers in cow fields.
Week 12	The physiology of reproduction and artificial insemination.
Week 13	Genetic improvement in poultry. Third Exam.
Week 14	Other agricultural animals - camels - their management and care.

Week 15	Other Farm Animals - Horses - Fish - Their Management and Care.
Week 16	End of Semester Exam.

Delivery Plan (Weekly Lab. Syllabus)		
المنهاج الاسبوعي للمختبر(الحقل Filed)		
Week	Material Covered	
Week 1	Lab 1: Visit the animal field (cow and sheep fields).	
Week 2	Lab 2: Joint field operations for cows and sheep.	
Week 3	Lab 3: Milking cows, learning about the lactation system of cattle and the automatic milking device.	
Week 4	Lab 4: Suckling young calves.	
Week 5	Lab 5: Learning about animal records.	
Week 6	Lab 6: Scientific trip to one of the livestock projects.	
Week 7	Lab 7: Methods of collecting semen and artificial insemination.	
Week 8	Lab 8: Feed materials and feed composition.	
Week 9	Lab 9: Animal housing.	
Week 10	Lab 10: Parasite control and treatment.	
Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Principles of Animal Production, written by Dr. Muzaffar Nafie Al-Sayegh - Dr. Taha Jassem Al-Taha - Dr. Suhaib Saeed Alwan Al-Zubaidi (1987).	Yes
Recommended Texts	Basics of animal production, written by A. Dr.. Ahmed Suleiman Mahmoud and A. Dr.. Mahmoud Riyad Al Mahdi (2013).	No
Websites	https://nicehatchincubators.com/the-principles-of-poultry-husbandry/	

Grading Scheme

مخطط الدرجات

Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C – Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

MODULE DESCRIPTION FORM

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information

معلومات المادة الدراسية

Module Title	Arabic language	Module Delivery
Module Type	Basic	☒ Theory ☐ Lecture
Module Code	UOB101	
ECTS Credits	2	

SWL (hr/sem)	32	☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar	
Module Level	UGx11 1	Semester of Delivery	1
Administering Department		College	Agriculture
Module Leader	Name	e-mail	E-mail
Module Leader's Acad. Title	Professor	Module Leader's Qualification	Ph.D.
Module Tutor	Name: khulud.ahmed	e-mail	E-mail Khulud.ahmed@uobasrah.edu.iq
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date	01/06/2026	Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	أهمية اللغة العربية للاختصاصات العلمية وميزتها بين اللغات الحية تجنب الأخطاء الشائعة وسلامة النطق
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	أن يتعرف الطالب على قواعد اللغة العربية أن يعرف الطالب كيفية بناء الجمل واستخراجها للعنوان المطلوب.

Indicative Contents المحتويات الإرشادية	تدرس اللغة العربية على عدة مستويات: المستوى النحوي: وهو المستوى الذي من خلاله يمكن معرفة المعنى التركيبي للنص. المستوى الصرفي وهو المستوى الذي يمكن من خلاله معرفة المعنى المتفرع على المعنى المعجمي، المستوى الدلالي: وهو المستوى الذي من خلاله يمكن معرفة دلالة الألفاظ (الجذر). المستوى الصوتي: وهو المستوى الذي يدرس الحروف والحركات والمقاطع الصوتية سواء كانت لفظاً أو جزءاً من لفظ.
--	---

Learning and Teaching Strategies	
استراتيجيات التعلم والتعليم	
Strategies	The main strategy that will be adopted in delivering this module are: 1. Power point presentation (Data show). 2. Explanation on the white board using different color markers. 3. Discussions with the student during teaching. 4. Interaction with students through daily problems practice through lecture. 5. Solve different problems with more exercises. 6. Submit assignment that develop student learning.

Student Workload (SWL)			
الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem)	33	Structured SWL (h/w)	2
الحمل الدراسي المنتظم للطلاب خلال الفصل		الحمل الدراسي المنتظم للطلاب أسبوعيا	
Unstructured SWL (h/sem)	17	Unstructured SWL (h/w)	2
الحمل الدراسي غير المنتظم للطلاب خلال الفصل		الحمل الدراسي غير المنتظم للطلاب أسبوعيا	
Total SWL (h/sem)	50		

Module Evaluation					
تقييم المادة الدراسية					
As		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuou s	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
Week	Material Covered
Week 1	أهمية اللغة العربية
Week 2	للاختصاصات
Week 3	العلمية، وميزتها بين
Week 4	اللغات الحية

Week 5	سورة الكهف أسباب
Week 6	تفسير عشرون آية مع
Week 7	الحفظ
Week 8	قواعد اللغة
Week 9	العربية/قواعد في
Week 10	الإعراب
Week 11	المبتدأ والخبر
Week 12	الاحرف المشبهة
Week 13	بالفعل
Week 14	الأفعال الناقصة
Week 15	المفاعيل

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	كتاب منهجي	Yes
Recommended Texts		
Websites		

Grading Scheme				
مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 - 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information		
معلومات المادة الدراسية		
Module Title	Computer	Module Delivery ☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical
Module Type	Core	
Module Code	UOB103	
ECTS Credits	3	
SWL (hr/sem)	48	

				☐ Seminar	
Module Level		UGx11 1		Semester of Delivery	
Administering Department		Type Dept. Code		College	
				Type College Code	
Module Leader	Name : Qahtan Adnan Hameed			e-mail	E-mail: Kahtan.hameed@uobasrah.edu.iq
Module Leader's Acad. Title		Assit.lecture		Module Leader's Qualification	
				MSC	
Module Tutor	Name (if available)			e-mail	E-mail
Peer Reviewer Name		Name		e-mail	E-mail
Scientific Committee Approval Date				Version Number	

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module		None	Semester
Co-requisites module		None	Semester

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	Explain how the student uses the computer program and how to deal with its applications.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	Teaching students about the components of the calculator and how to use its programs and applications so that students have a comprehensive knowledge of the calculator. The student's knowledge of the basics of computer learning Teaching students the main components of the computer and its most

	important keys Knowledge of the components of the window system Students know how to create folders
Indicative Contents المحتويات الإرشادية	

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The lesson includes (2) hours of theory and (3) hours of practical - the number of weekly hours is approved, distributed over 15 weeks

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل		Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل		Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل			

Module Evaluation تقييم المادة الدراسية					
As		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Forma	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11

tive assess ment	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuou s	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summ ative assess ment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
Week	Material Covered
Week 1	Definition of computer Introduction to the study of computers and types of computers
Week 2	Main components of a computer The most important Special Keys on the keyboard
Week 3	WINDOWS SYSTEM
Week 4	Folders How to create a folder
Week 5	First month exam
Week 6	Properties
Week 7	Start and its components
Week 8	Paint program Paint Windows drawing window
Week 9	Notepad program

Week 10	WordPad program
Week 11	Who is smarter, computer or human?
Week 12	An overview of the Internet
Week 13	How can we know the file type from its extension?
Week 14	Copy the file without burning it

Delivery Plan (Weekly Lab. Syllabus)	
المنهاج الاسبوعي للمختبر	
Week	Material Covered
Week 1	تطبيقات مباشرة على الحاسبة
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	There are no methodological books	There are no methodological books
Recommended Texts	Computer Curricula, Electronic Calculator Center,	Computer Curricula, Electronic Calculator Center,
Websites	No	

Grading Scheme				
مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 – 89	Above average with some errors
	C – Good	جيد	70 – 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 – 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 – 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (فيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information						
معلومات المادة الدراسية						
Module Title	Agricultural Economy		Module Delivery			
Module Type	Core		☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar			
Module Code	AGEC129					
ECTS Credits	5					
SWL (hr/sem)	33					
Module Level	UGx11	1	Semester of Delivery	1		
Administering	Type Dept. Code	College	Type College Code			

Department				
Module Leader	Khawla Rashige Hassan		e-mail	Khawla.hassan@uobasrah.edu.iq
Module Leader's Acad. Title		Assistant Prof.	Module Leader's Qualification	Ph.D.
Module Tutor	Name (if available)		e-mail	E-mail
Peer Reviewer Name		Name	e-mail	E-mail
Scientific Committee Approval Date		2/05/2026	Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None		Semester
Co-requisites module	None		Semester

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	Introducing the principles and basics of agricultural production economics and economic principles related to production, marketing, etc.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	Agricultural economics contributes to providing students with the following knowledge: Introduction to agricultural economics and consumer behavior theory

Indicative Contents المحتويات الإرشادية	
---	--

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The method of presentation is based on economic theories and laws, supported by exercises and examples, to understand the mechanism of their work in managing agricultural projects and developing income, whether at the level of the economic unit or the agricultural sector. The course management is based on student interaction through analysis and reasoning of the results of economic calculations of costs and other economic variables.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل		Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل		Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	200		

Module Evaluation

تقييم المادة الدراسية					
As		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuou s	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
Week	Material Covered
Week 1	Introduction to economics and consumer behavior theory
Week 2	The role of agricultural activity in the national economy
Week 3	Economics of agricultural production

Week 4	Production costs
Week 5	Agricultural prices
Week 6	Markets and their types
Week 7	the first exam
Week 8	Farm management
Week 9	Agricultural development
Week 10	Agricultural marketing
Week 11	Agricultural finance
Week 12	International agricultural organizations and their role in supporting the agricultural sector
Week 13	Climate changes and their impact on the agricultural sector

Week 14	Agricultural tourism
Week 15	Evaluation and management of agricultural projects
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus)	
المنهاج الاسبوعي للمختبر	
Week	Material Covered
Week 1	
Week 2	
Week 3	
Week 4	
Week 5	

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	الاقتصاد الزراعي/ د. عبد الوهاب مطر الداهري/ وزارة التعليم العالي والبحث العلمي/ 1980	Yes
Recommended Texts	مبادئ الاقتصاد الزراعي/ د. احمد أبو اليزيد	No
Websites	(4readlib.com) محمود سليم فورريد - PDF كتاب الاقتصاد الزراعي	
Week 6		
Week 7		

Grading Scheme				
مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 - 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information		
معلومات المادة الدراسية		
Module Title	Soil Science	Module Delivery
Module Type	Core	☒ Theory

Module Code	SOLL114		☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar		
ECTS Credits	7				
SWL (hr/sem)	78				
Module Level		UGx11 1	Semester of Delivery		1
Administering Department		Crop prpduction	College	College of Agriculture	
Module Leader	Wafaa Abdulameer Ahmed		e-mail	E-mail: wafa.ahmed@uobasrah.edu.iq	
Module Leader's Acad. Title		Assist. of Professor	Module Leader's Qualification		Ms. C.
Module Tutor	Name (if available)		e-mail	E-mail	
Peer Reviewer Name		Name	e-mail	E-mail	
Scientific Committee Approval Date		01/06/2026	Version Number	1.0	

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Objectives أهداف المادة الدراسية	1. Understanding Soil Formation: • Learn about the processes of soil formation and the factors that influence soil development. 2. Soil Properties and Classification: • Identify and describe physical, chemical, and biological properties of soils. • Understand soil classification systems and their significance. 3. Soil Function and Ecosystem Services: • Explore the role of soil in ecosystems, including its functions in water filtration, nutrient cycling, and carbon storage. 4. Soil Management Practices: • Examine sustainable soil management practices to enhance soil health and productivity. 5. Impact of Soil on Agriculture: • Analyze how soil characteristics affect agricultural practices and crop production.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Soil Conservation and Land Use: • Identify practices for soil conservation and erosion control. • Analyze the impact of land use changes on soil health. 2. Environmental Impact: • Evaluate the role of soils in environmental sustainability and ecosystem services. • Assess the impact of pollutants on soil health and remediation strategies. 3. Research and Practical Skills: • Conduct soil sampling and laboratory analysis. • Apply statistical methods to interpret soil data. 4. Interdisciplinary Applications:

	- Integrate knowledge from related fields such as agronomy, ecology, and geology. - Discuss the implications of soil science in climate change and food security.
Indicative Contents المحتويات الإرشادية	Soil formation and Soil genesis (20 hrs) physical properties (20 hrs) soil water(20 hrs) Colloid's properties and soil chemical properties (20 hrs) Salinity and alkalinity in the soil and the reclamation of salt-affected soils(20 hrs) Biological and biochemical properties of soil (20 hrs) Soil fertility and plant nutrition and Soil organic matter(20 hrs) Classification and management of soils in Iraq (10 hrs) Total hrs = 150= SSWL - (Exam hrs) = 150 - 4 = 146 hr (Time table hrs x 15 weeks)

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	Here are some effective learning and teaching strategies for soil science: 1. Hands-On Experiments - Conduct soil sampling and analysis in the field. - Use soil texture tests (e.g., ribbon test) to determine soil types. 2. Field Trips - Visit local farms, gardens, or conservation areas to observe soil in various contexts.

	Explore soil management practices in different ecosystems.
	3. Interactive Learning

Student Workload (SWL)			
الحمل الدراسي للطالب محسوب له ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	75	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	5
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	75	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	5
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	150		

Module Evaluation					
تقييم المادة الدراسية					
As		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	15% (10)	Continuous	All
	Report	1	5% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	2hr	50% (50)	16	All
Total assessment			100% (100)		

	Marks)		
--	--------	--	--

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
Week	Material Covered
Week 1	Soil formation
Week 2	Soil genesis
Week 3	physical properties
Week 4	physical properties
Week 5	soil water
Week 6	monthly exams
Week 7	Colloid's properties
Week 8	soil chemical properties
Week 9	Salinity and alkalinity in the soil
Week 10	the reclamation of salt-affected soils
Week 11	Biological and biochemical properties of soil
Week 12	Soil fertility and plant nutrition
Week 13	monthly exams
Week 14	Soil organic matter
Week 15	Classification and management of soils in Iraq
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus)

المناهج الاسبوعي للمختبر	
Week	Material Covered
Week 1	Moisture content measurement
Week 2	Measuring the particle and bulk density of soil and its porosity
Week 3	Estimation of percentages of sand, clay and silt and determination of soil texture
Week 4	Measurement of soil pH and soil salinity
Week 5	Determination of some positive dissolved ions in soil solution (Ca^{2+} , Mg^{2+} , Na^{+} and K^{+})
Week 6	Determination of some negative dissolved ions in soil solution (Cl^{-} , CO_3^{-2} and HCO_3^{-})
Week 7	Exam

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Fundamentals of Soil	Yes
Recommended Texts	Practices soil Science	Yes
Websites	https://www.slideshare.net/SantoshFrnd1/agro-ecological-region-and-sub-rgrions-of-india	

Grading Scheme				
مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors

	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information				
معلومات المادة الدراسية				
Module Title	Engineering Drawing		Module Delivery	
Module Type	Core		☒ Lab ☒ Tutorial ☒ Practical	
Module Code	ENDR117			
ECTS Credits	7			
SWL (hr/sem)	48			
Module Level		UGx11 1	Semester of Delivery	2
Administering Department			College	
Module Leader	Asmaa Abd Ala AL Aedan		e-mail	E-mail
Module Leader's Acad. Title		Lecture	Module Leader's Qualification	Msc.

Module Tutor	Ali Hussein Awad	e-mail	ali.awad@uobasrah.edu.iq
Peer Reviewer Name	Assad Yousif Khudher	e-mail	E-mail assad.khudher@uobasrah.edu.iq
Scientific Committee Approval Date	01/05/2026	Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	• Working in the field of engineering drawing to create engineering plans and drawings • Obtaining the skills required for the post-graduation plan (postgraduate studies). • Applying for external tests by local/regional/international bodies. • Providing students with skills to work in scientific and research laboratories and study engineering drawing
Module Learning	1- Learn about manual drawing tools and modern methods

Outcomes مخرجات التعلم للمادة الدراسية	2- Correct installation of the drawing board and implementation of the information table 3- Professional drawing of lines, curves, and circles 4- Drawing of projections 5- Other methods for drawing projections 6- Perspective drawing 7- Section drawing, shading, and drawing of hidden parts 8- Detailed drawing 9- Assembly drawing 10- Inking 11- Methods of saving drawing boards 12- Quick drawing 13- Documenting and authenticating the boards 14- Executive drawing 15- Learn about automated drawing
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. - Accuracy - Imagination - Clear ideas before starting to draw - Taking into account all dimensions including the dimensions of the size and the dimensions of the site - Take all the information, data and ratification - Determine the shades of the cut, the vehicle, and the hidden parts - Setting details to read the painting and all process and assembly fees - Clean and take into account the conditions for saving paintings

استراتيجيات التعلم والتعليم Learning and Teaching Strategies
--

Strategies	-To practice in the first place and apply scientific conditions in drawing parts and mechanical systems - Watch models and models on reality (physics) to help imagine and apply - Evaluating the duties after completing them immediately Classical evaluation and the end of the course
------------	--

Student Workload (SWL)			
الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	45	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا	3
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	80	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا	5
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل	125		

Module Evaluation					
تقييم المادة الدراسية					
As		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	5	5%(5)	5 and 10	All 3 h Structured
	Assignments	5	5% (5)	2 and 15	All 3 h Structured
	Projects / Lab.	10	20% (20)	Continuou s	All hours Structured
	Report	0	0	0	
Summative	Midterm Exam	2hr	10% (10)	7	The Structured after 7 week

e assessment	Final Exam	3hr	50% (50)	16	The Structured all 16-week
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Lab. Syllabus)	
المناهج الاسبوعي نظري + العملي (مختبر الرسم)	
Week	Material Covered
Week 1	Introduction to engineering drawing tools
Week 2	Introduction to the types of engineering drawing lines
Week 3	How to plan and install a drawing board
Week 4	Engineering operations, part one, includes A- Bisecting a straight line and B- Bisecting an angle.
Week 5	Engineering operations, part two, includes: C- Draw a pentagon inside a circle.
Week 6	Engineering operations, part three, includes: D- Draw a hexagon given the side length and E- Draw a hexagon surrounding a circle
Week 7	Engineering operations, part four, includes: E- Draw an arc tangent to a straight line
Week 8	Engineering operations, part Five, includes: F- Draw an arc tangent to the circumference of a circle and a known straight line, and Draw a tangent to an interior circle.
Week 9	Dimensions of size and dimensions of the site
Week 10	Drawing of the projected (three faces)
Week 11	The drawing of the engineering (six faces)
Week 12	Perspective drawing (model)
Week 13	Draw the pieces and script
Week 14	The concept of detailed and assembly

Week 15	Inheritance
Week 16	The concept of drawing using the machine and Preparatory week before the Final Exam

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	الرسم الهندسي لطلبة كليات الزراعة. د. ناطق صبري حسن. 9	Yes
Recommended Texts	Engineering drawing for engineers and technicians	No
Websites	https://books-library.net/free-1020743869-download	

Grading Scheme				
مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 – 100	Outstanding Performance
	B - Very Good	جيد جدا	80 – 89	Above average with some errors
	C - Good	جيد	70 – 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 – 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 – 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information					
معلومات المادة الدراسية					
Module Title	Plane surveying			Module Delivery	
Module Type	Core			☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar	
Module Code	PLSU118				
ECTS Credits	6				
SWL (hr/sem)	78				
Module Level		UG11 1	Semester of Delivery		
Administering Department		Field Crops	College	Type College Code	
Module Leader	Mohanad A. ALSULAIMAN		e-mail	Mohanad.alsulaiman@uobasrah.edu.iq	
Module Leader's Acad. Title		Assistant Professor	Module Leader's Qualification		Ph.D.
Module Tutor	Name (if available)		e-mail	E-mail	
Peer Reviewer Name		Name	e-mail	E-mail	
Scientific Committee Approval Date		01/06/2026	Version Number		1.0

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	1. Identify the method of drawing maps for areas and fields and identify the types of drawing scales and their design 2. 2- Identify the tools, units and measurement systems 3. 3- Identify the optical distance measuring devices, their parts, method of use and working principle 4. 4- Focus on knowing the parts and method of using the level and theodolite devices and the advantages of using them 5. 5- Measuring the quantities of excavation and backfill 6. 6- Measuring levels and chain leveling
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	Important: Write at least 6 Learning Outcomes, better to be equal to the number of study weeks. 1. Identify the method of drawing maps for areas and fields and identify the types of drawing scales and their design 2. 2- Identify the tools, units and measurement systems 3. 3- Identify the optical distance measuring devices, their parts, method of use and working principle 4. 4- Focus on knowing the parts and method of using the level and theodolite devices and the advantages of using them 5. 5- Measuring the quantities of excavation and backfill 6. 6- Measuring levels and chain leveling
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. <u>Part A - Circuit Theory</u> DC circuits – Current and voltage definitions, Passive sign convention and circuit elements, Combining resistive elements in series and parallel. Kirchhoff's laws and Ohm's law. Anatomy of a circuit, Network reduction, Introduction to mesh and nodal

analysis. [SSWL=15 hrs]

AC circuits I – Time dependent signals, average and RMS values. Capacitance and inductance, energy storage elements, simple AC steady-state sinusoidal analysis. [15 hrs]

AC Circuits II - Phasor diagrams, definition of complex impedance, AC circuit analysis with complex numbers. [SSWL=10 hrs]

RL, RC and RLC circuits - Frequency response of RLC circuits, simple filter and band-pass circuits, resonance and Q-factor, use of Bode plots, use of differential equations and their solutions. Time response (natural and step responses). Introduction to second order circuits. [SSWL=15 hrs]

Revision problem classes [SSWL=6 hrs]

Part B - Analogue Electronics

Fundamentals

Resistive networks, voltage and current sources, Thevenin and Norton equivalent circuits, current and voltage division, input resistance, output resistance, coupling and decoupling capacitors, maximum power transfer, RMS and power dissipation, current limiting and over voltage protection. [SSWL=15 hrs]

Components and active devices – Components vs elements and circuit modeling, real and ideal elements. Introduction to sensors and actuators, self-generating vs modulating type sensors, simple circuit interfacing. [SSWL=14 hrs]

Diodes and Diode circuits – Diode characteristics and equations, ideal vs real. Signal conditioning, clamping and clipping, rectification and peak detection, photodiodes, LEDs, Zener diodes, voltage stabilization, voltage reference, power supplies. [SSWL=15 hrs]

Total hrs = 200 = SSWL - (Exam hrs) = 200 - 4 = 195 hr (Time table hrs x 15 weeks)

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies

Type something like: The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, interactive tutorials and by considering types of simple experiments involving some sampling activities that are interesting to the students.

Student Workload (SWL)

الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem)

الحمل الدراسي المنتظم للطلاب خلال الفصل

200

Structured SWL (h/w)

الحمل الدراسي المنتظم للطلاب أسبوعيا

5

Unstructured SWL (h/sem)

الحمل الدراسي غير المنتظم للطلاب خلال الفصل

125

Unstructured SWL (h/w)

الحمل الدراسي غير المنتظم للطلاب أسبوعيا

8

Total SWL (h/sem)

الحمل الدراسي الكلي للطلاب خلال الفصل

200

Module Evaluation

تقييم المادة الدراسية

As

Time/Number

Weight (Marks)

Week Due

Relevant Learning Outcome

Formative
assessment

Quizzes

2

10% (10)

5 and 10

LO #1, #2 and #10, #11

Assignments

2

10% (10)

2 and 12

LO #3, #4 and #6, #7

	Projects / Field	1	10% (10)	Continuou s	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
Week	Material Covered
Week 1	Introduction and Definition of survey, types of surveys, its importance in agriculture, requirements for a good survey
Week 2	Measurement systems, units of measurement, accuracy in surveys, errors
Week 3	Drawing scales, types, features, how to doing it.
Week 4	Methods for measuring distances, from nature and from maps, direct methods for horizontal and diagonal distances
Week 5	Errors in survey work, methods of addressing and overcoming them
Week 6	Surveying by tape, station selection conditions, field book note
Week 7	Mid-term Exam + Indirect methods of measuring distances, how to use surveying devices for this purpose
Week 8	Measuring distances using electronic devices
Week 9	Areas, how to calculate them for regular and irregular shapes, calculate areas using some devices
Week 10	Leveling, its terminology, its importance in agriculture, the use of the level.
Week 11	Types of leveling, curvature and refraction phenomena and their treatment

Week 12	Methods for calculating point levels and elevation difference, direct and indirect
Week 13	Second exam+ working the longitudinal sectors, how to calculate the slope and draw the longitudinal section
Week 14	Calculation of excavation and backfill quantities
Week 15	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus)	
المنهاج الاسبوعي للمختبر	
Week	Material Covered
Week 1	Lab 1: Drawing maps and how to put scale
Week 2	Lab 2: learning how to measure distance at plane and winding lands by different meters
Week 3	Lab 3: Applied how to erect and drop a column by several ways
Week 4	Lab 4: Application of distance measurement process using leveling device
Week 5	Lab 5: Measure distances by a leveling device
Week 6	Lab 6: Apply Leveling and chain leveling
Week 7	Lab 7: Calculation of excavation and backfill quantities

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Plane Survey a methodical book	Yes
Recommended	Surveying-to New Age International Pvt Ltd	No

Texts	Publishers (2006)-A.M. Chandra	
Websites	https://www.britannica.com/technology/surveying	

Grading Scheme				
مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 - 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information

معلومات المادة الدراسية

Module Title	Horticultural science		Module Delivery	
Module Type	Core		☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar	
Module Code	HORT216			
ECTS Credits				
SWL (hr/sem)				
Module Level			Semester of Delivery	
Administering Department		Type Dept. Code	College	Type College Code
Module Leader	Name :Asst Profh Dr. Omar Amer Ibrahim		e-mail	E-mail: omar.ibrahem@uobasrah.edu.iq
Module Leader's Acad. Title			Module Leader's Qualification	
Module Tutor	Name (if available)		e-mail	E-mail
Peer Reviewer Name		Name	e-mail	E-mail
Scientific Committee Approval Date			Version Number	

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module		Semester	
Co-requisites module		Semester	

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives	Graduating students capable of:
أهداف المادة الدراسية	-What is horticulture science and what are the economically productive

	horticultural plants? -Introducing the student to the most important sections of horticulture that can be benefited from . -Helping students understand the syllabuses and vocabulary of the Principles of Horticulture science lesson and curriculum. - Introducing modern scientific foundations in horticultural project management.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	
Indicative Contents المحتويات الإرشادية	

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The lesson includes (2) hours of theory and (3) hours of practical - the number of weekly hours is approved, distributed over 15 weeks

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل		Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل		Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل			

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuou s	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

Week 1	Introduction to horticulture science
Week 2	Vegetable science and the importance of vegetable crops
Week 3	vegetable sections
Week 4	Weather, Climate factors.
Week 5	Ground factors
Week 6	Internal factors
Week 7	Fruit crops and their importance

Week 8	Fruit sections.
Week 9	Temperatures.
Week 10	Air humidity and rain.
Week 11	Wind effects.
Week 12	Ornamental plants.
Week 13	Ornamental plants sections.
Week 14	Factors affecting ornamental plants.

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Horticultural facilities
Week 2	Lathhouse
Week 3	Greenhouses and Sash Houses
Week 4	Plastic Houses and Plastic tunnels
Week 5	Carrying out and practicing vegetative propagation in plants.
Week 6	Vegetative propagation methods in vegetables
Week 7	Trans plants , Acclimatization and The Nursery

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?

Required Texts	Principles of horticulture science.	
Recommended Texts	Principles of horticulture science. Assist. Prof. Dr. Karim Saleh Abdul and Prof. Dr. Saad Zaghloul Al-Najjar, (1984).	
Websites		

Grading Scheme مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 – 89	Above average with some errors
	C – Good	جيد	70 – 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 – 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 – 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information

معلومات المادة الدراسية

Module Title	Agricultural mechanization equipment		Module Delivery		
Module Type	Core		☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar		
Module Code					
ECTS Credits					
SWL (hr/sem)					
Module Level			Semester of Delivery		
Administering Department		Field crops	College	College of Agriculture	
Module Leader	Akram Abdul Daem Ahmed		e-mail	akrram.ahmed@Uobasrah.edu.iq	
Module Leader's Acad. Title		Lecturer	Module Leader's Qualification		Phd
Module Tutor	Akram Abdul Daem Ahmed		e-mail	akrram.ahmed@Uobasrah.edu.iq	
Peer Reviewer Name		Name	e-mail	E-mail	
Scientific Committee Approval Date			Version Number		

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Objectives أهداف المادة الدراسية	- Identifying the components and parts of agricultural tractors, starting with the engine and its primary and auxiliary systems. - Explaining fundamental engineering principles and their applications across various agricultural fields. - Examining the different types of agricultural machinery and equipment used in crop production—covering both structure and function—from soil tillage and seedbed preparation through crop maintenance and harvesting, to the subsequent processes of preparing produce for consumption or storage. - Performing the necessary adjustments to agricultural machinery to ensure optimal operation and achieve the intended purpose of their use. - Ability to maintain, service, and repair agricultural equipment. - Ability to disassemble and assemble such machinery. - Ability to operate agricultural equipment in the field. - Ability to hitch implements to the agricultural tractor and perform the necessary adjustments and calibrations suited to the specific agricultural task to be carried out.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	- Identify types of agricultural machinery and equipment, their components, and their primary functions. - Explain the operating principles of agricultural tractors and equipment used for tillage, planting, crop maintenance, and harvesting. - Select the appropriate agricultural equipment for specific farming operations based on soil type, crop characteristics, and operational conditions. - Operate agricultural machinery and equipment correctly and safely in accordance with operating instructions. - Perform adjustments and calibration for planting, fertilizing, spraying, and harvesting equipment. - Calculate field performance rates, field capacity, fuel consumption, and machinery operating efficiency. - Select the appropriate machine or equipment based on the requirements of the agricultural operation and tractor capacity. - Diagnose common malfunctions and operational issues, and perform basic routine maintenance. - Apply occupational safety rules when operating and maintaining agricultural machinery and equipment. - Evaluate the performance of agricultural equipment in terms of technical, economic, and energy-efficiency aspects. - Utilize acquired knowledge to plan and organize on-farm agricultural mechanization operations. - Work both individually and in teams to conduct experiments and practical applications related to agricultural equipment.
Indicative Contents المحتويات الإرشادية	##Indicative Course Content ** .1Introduction to Agricultural Mechanization** - Concept and importance of agricultural mechanization. - Evolution of agricultural mechanization. - Objectives of using agricultural machinery and equipment.

- Factors influencing equipment selection.

2-Agricultural Power Sources**

- Agricultural tractors and their types.
- Main tractor components and their functions.
- Horsepower and torque.
- Power transmission system.
- Power Take-Off (PTO) shaft.
- Hydraulic lift system.

3- Soil Preparation Equipment**

- Plows (various types.)
- Harrows.
- Furrowers and field implements.
- Land leveling and smoothing equipment.
- Conservation tillage equipment.
- Equipment adjustment and field performance calculations.

4- Planting and Seeding Equipment

Broadcast seeders.

Drill seeders.

Precision planters.

Equipment for planting various crops.

Calibration of seeding machines.

Calculating seed quantity and coverage rate.

5- Fertilization Equipment

Solid fertilizer spreaders.

Liquid fertilizer equipment.

Fertilization equipment calibration methods.

Factors affecting fertilizer distribution uniformity.

Irrigation and Field Service Equipment

Water pumping and conveyance equipment.

Weed control equipment.

6- Irrigation and field service equipment

Water pumping and transport equipment

Weed control equipment

Agricultural sprayers

Pesticide application equipment

Safety procedures during use

Agricultural sprayers.

Pesticide application equipment.

Safety procedures during operation.

7- Harvesting Equipment

Concept of mechanical harvesting.

Grain harvesting machines.

Combine harvesters.

Forage crop harvesting equipment.

Corn and other crop harvesting equipment.

Adjusting harvesting machines and minimizing losses.

8- Agricultural Machinery Field Performance

Theoretical and actual field capacity.

Field efficiency.

Fuel consumption.

	Calculating machinery operating costs. Selecting the appropriate machine size for the task. 9- Agricultural Equipment Maintenance Preventive maintenance. Fault diagnosis. Tractor and equipment maintenance. Lubrication and oil changes. Equipment storage and preservation. 10- Occupational Safety Hazards of operating agricultural machinery. Tractor operation rules. Personal Protective Equipment (PPE). Safety when using pesticides and rotary machinery. Emergency procedures. 11- Practical Applications Identifying tractor and equipment components. Hitching equipment to the tractor. Calibrating tillage, seeding, and fertilization machinery. Measuring field capacity and efficiency. Calculating fuel consumption and operating costs. Performing maintenance and periodic inspections.
--	--

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The lesson includes (2) hours of theory and (3) hours of practical - the number of weekly hours is approved, distributed over 15 weeks

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	????????	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	????????
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	????????	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	????????????????
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	????????????????		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuou s	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

Week 1	Types of agricultural tractors
Week 2	Power transmission systems and components in agricultural tractors
Week 3	Tractor engine: stationary and moving parts and their functions
Week 4	Engine auxiliary systems Transmission (gearbox) and clutch Differential and final drive
Week 5	Engine lubrication system
Week 6	Engine cooling system
Week 7	Midterm exam
Week 8	Fuel system – oil and fuel filters
Week 9	Primary soil preparation machinery (tillage implements, (moldboard plows)

Week 10	Chisel plow
Week 11	rotary tiller
Week 12	Secondary soil preparation machinery – harrows Specialized equipment
Week 13	Transplanting, seeding (planting) - fertilizing machinery-
Week 14	Harvesting machinery Combine harvester
Week 15	Comprehensive Review

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Identifying types of agricultural tractors.
Week 2	Identifying the components of an agricultural tractor.
Week 3	Identifying the components of an agricultural tractor engine.
Week 4	Identifying primary soil preparation implements (and their components).
Week 5	Identifying secondary soil preparation implements (and their components).
Week 6	Learning how to hitch implements to an agricultural tractor.
Week 7	Using a tillage implement to prepare agricultural land using a specific tillage method.
Week 8	Identifying specialized implements and their uses
Week 9	Identifying hoeing and inter-row cultivation implements.
Week 10	Familiarization with types of fertilizer application machinery.
Week 11	Familiarization with types of planting machinery and their calibration.
Week 12	Field training using a disc harrow.
Week 13	Field training using a cultivator.
Week 14	Familiarization with the components of a combine harvester and their adjustment.
Week 15	Comprehensive review.

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?

Required Texts	الميكنة الزراعية ، د. محمد سيد عمران ، د. كمال محمد نافع. 2009. FMO. (1984) Fundamentals of Machine Operation. John Deere Service Training Dept., Moline, Illinois. USA.	
Recommended Texts		
Websites	http://www.Lab Safety Supply - EZ Facts Safety Info - Document #221, Proper Lifting Techniques.htm.	

Grading Scheme مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 – 89	Above average with some errors
	C – Good	جيد	70 – 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 – 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 – 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

MODULE DESCRIPTION FORM

Module Information		
Module Title	Botany	Module Delivery

Module Type	Theoretical and practical	☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar		
Module Code	BOTY228			
ECTS Credits	7			
SWL (hr/sem)	175			
Module Level		UGx11 2	Semester of Delivery	2
Administering Department		Field crops	College	Agriculture
Module Leader	Sundus Abdulkariem Mohammed Sundus Kamil Jabbar	e-mail	sundus.mohammed@uobasrah.edu.iq sundus.jabar@uobasrah.edu.iq	
Module Leader's Acad. Title		Professor	Module Leader's Qualification	Ph.D.
Module Tutor	Sundus Abdulkariem Mohammed	e-mail	sundus.mohammed@uobasrah.edu.iq	
Peer Reviewer Name		Name	e-mail	E-mail
Scientific Committee Approval Date		Version Number		

Relation with other Modules			
Prerequisite module	It is related to Plant Taxonomy, Fundamentals of Field Crops, Cereal Crops, Legume Crops, and other study courses such as Plant Physiology and others."	Semester	
Co-requisites module	It is related to Industrial Crops, Oil and Sugar Crops, and Fiber Crops, as well as Ecology and Fundamentals of Soil Science."	Semester	

Module Aims, Learning Outcomes and Indicative Contents
--

Module Objectives	Studying plants and identifying them through the study of general cell structure, as well as the external morphology and internal anatomy of the plant. It covers the relationship between botany and other sciences, and identification of plant body parts, their types, and structure, starting from cells, to tissues, and up to the main plant organs. It also includes describing seed shapes and their germination, and understanding roots, stems, leaves, and flowers in terms of origin, structure, and function. Additionally, it determines the impact of environmental factors and their relationship to plant organ modifications, alongside presenting some physiological processes that occur within the plant. Students will also learn about the structure and usage of the light microscope. Furthermore, the practical part includes visual observations with the naked eye and using the microscope to study the microscopic parts of higher plants. It also covers identifying the external parts and internal anatomy of plants, as well as cell divisions (mitosis and meiosis) occurring in the somatic and reproductive cells of ".both higher and lower plants
Module Learning Outcomes	1- Understanding and absorbing the theoretical material and applying it in practical lessons to prepare students who are capable of securing new job opportunities. 2- Preparing students who have the ability to pursue further learning and professional development both inside and outside Iraq. 3- Preparing scientific researchers in the field of field crops who are capable of providing advice, guidance, and up-to-date information within the agricultural sector..
Indicative Contents	
Learning and Teaching Strategies استراتيجيات التعلم والتعليم	

Strategies	-The ability to work in the agricultural sector, specializing in field crops.		
	-Encouraging students to achieve academic excellence to secure new job opportunities.		
	-Graduating students who have the ability to pursue further learning and professional development both inside and outside Iraq.		
	Preparing scientific researchers in the field of field crops.		
Student Workload (SWL) Calculated for 15 weeks			
Structured SWL (h/sem)	78	Structured SWL (h/w)	7
Unstructured SWL (h/sem)	97	Unstructured SWL (h/w)	6
Total SWL (h/sem)	175		

Module Evaluation					
As		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
Week	Material Covered
Week 1	Brief History of Botany Importance of Plants to Humans
Week 2	Relationship of Botany with Other Sciences Differences Between Plant and Animal Cells Chemical Elements and Compounds of Plant Inorganic Components in Plants Water – Gases – Salts – Acids and Bases Organic Components in Plants: Carbohydrate
Week 3	Organic Acids: (Fatty Acids - Plant Acids - Amino Acids - Nucleic Acids), Proteins, Enzymes Nucleoproteins, Lipids
Week 4	The Plant Cell and its Discovery Cell Contents: Protoplast and its Components Protoplasm (Protoplasmic Components) / Non-Protoplasmic Component
Week 5	The Cell Wall Formation, Structure, Chemistry, and Nature of the Cell Wall
Week 6	Exam 1
Week 7	Cell Division Direct Division (Amitosis) Indirect Division (Mitosis), Reduction Division (Meiosis)
Week 8	Plant Tissues Meristematic Tissues and their Classification Permanent Tissues Stomata: (Formation – Structure – Function)
Week 9	Fibers, Phloem, Vascular Bundles and their Types Secretory Tissues
Week 10	Roots: Root Characteristics and Root Zones

	Types of Roots, Root Anatomy
Week 11	Exam 2
Week 12	Stems: Characteristics and Growth Habits Classification of Stems According to Function Buds and their Types Branching and its Types Stem Anatomy
Week 13	Leaves: Leaf Structure and Types of Leaves Leaf Arrangement on the Stem (Phyllotaxy) Leaf Development and Leaf Abscission
Week 14	Flowers and Inflorescences Pollination and Fertilization (التلقيح والاختصاص) Types of Inflorescences, Fruits and Seeds Fruit Structure and Types
Week 15	Seeds: Structure and Types of Seeds Germination and Germination Requirements Types of Germination
Week 16	Final Exam (End of Semester)

Delivery Plan (Weekly Lab. Syllabus)	
Week	Material Covered
Week 1	"The microscope: its parts, how to use it, how to examine slides with it, and calculating the magnification power of lenses".
Week 2	Explaining types of slides, and the difference between permanent and temporary slides. How to prepare temporary slides
Week 3	The Plant Cell -Cell Contents -A- Protoplast and its Components -Protoplasm (Protoplasmic Components) -Non-Protoplasmic Components -B- The Cell Wall-Formation, Structure, Chemistry, and Nature of the Cell Wall - Pits and their Type

Week 4	Cell Division: Direct Division (Amitosis), Indirect Division (Mitosis), Reduction Division (Meiosis) Plant Tissues Meristematic Tissues and their Classification (٥) Permanent Tissues
Week 5	Exam-1
Week 6	Connective Tissues -Stomata: (Formation – Structure – Function) Non-Secretory Appendages (Trichomes/Hairs)
Week 7	Vascular Tissues –Fibers –Phloem -Vascular Bundles and their Types
Week 8	Roots -The Root and its Characteristics -Root Zones -Types of Roots -Root Anatomy
Week 9	Stems -Characteristics and Growth Habits -Classification of Stems According to Function) Buds and their Types / Branching and its Types
Week 10	Leaves - Leaf Structure -Types of Leaves -Leaf Arrangement on the Stem (Phyllotaxy)
Week 11	Flowers and Inflorescences-Development of Floral Whorls -Pollination and Fertilization Types of Inflorescences
Week 12	Fruits and Seeds Fruit Structure and Types
Week 13	Seeds and their Structure Types of Seeds
Week 14	Exam-2

Learning and Teaching		
	Text	Available in the Library?
Required Texts	-Al-Musawi, Abdullah Hamad and Hussein Ali Al-Saadi. 1980. Practical General Botany. Ministry of Higher Education. -Gabr, Mahmoud Mohamed, Ismail Mohamed Kamel, and Effat Fahmy Shabana. 2011. Fundamentals of General Botany. Dar Al-Fikr Al-Arabi. Cairo.	Yes
Recommended	-Al-Anni, Dr. Badri Owaid and Qaisar Najib Saleh. 1999. Fundamentals of Plant Anatomy. University of	yes

Texts	Mosul Press.	
Websites		

Grading Scheme			
Group	Grade	Marks %	Definition
Success Group (50 - 100)	A - Excellent	90 - 100	Outstanding Performance
	B - Very Good	80 - 89	Above average with some errors
	C - Good	70 - 79	Sound work with notable errors
	D - Satisfactory	60 - 69	Fair but with major shortcomings
	E - Sufficient	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	(45-49)	More work required but credit awarded
	F – Fail	(0-44)	Considerable amount of work required

Module Information						معلومات المادة الدراسية
Module Title	Computer 2			Module Delivery		
Module Type	B			☒ Theory ☒ Lecture ☒ Lab ☒ Tutorial ☒ Practical ☒ Seminar		
Module Code	UOB203					
ECTS Credits	2					
SWL (hr/sem)	50					
Module Level		2	Semester of Delivery			
Administering Department		BSc. Machines	College	Type College Code		
Module Leader	Azhar Jihad AbdulSada		e-mail	azhar.jihad@uobasrah.edu.iq		
Module Leader's Acad. Title		Assistant Lecturer	Module Leader's Qualification		M.Sc	
Module Tutor	Azhar Jihad AbdulSada		e-mail	azhar.jihad@uobasrah.edu.iq		
Peer Reviewer Name		Azhar Jihad AbdulSada	e-mail	azhar.jihad@uobasrah.edu.iq		
Scientific Committee Approval Date		11/06/2026	Version Number		1.0	

Relation with other Modules				العلاقة مع المواد الدراسية الأخرى
Prerequisite module	None	Semester		
Co-requisites module	None	Semester		

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Objectives أهداف المادة الدراسية	1. التعرف بمفاهيم الرسم الهندسي باستخدام الحاسوب وأهميته في التطبيقات الزراعية والهندسية 2. إكساب الطلبة المهارات الأساسية للتعامل مع برنامج AutoCAD. 3. تمكين الطلبة من إنشاء الرسومات الهندسية ثنائية الأبعاد (D2) وتعديلها 4. تدريب الطلبة على استخدام أدوات الرسم والتعديل والقياس بدقة 5. تطوير قدرة الطلبة على إعداد المخططات الفنية والهندسية وطباعتها 6. تعزيز مهارات توظيف التصميم بمساعدة الحاسوب في المشاريع الزراعية والهندسية 7. إعداد الطلبة لاستخدام البرمجيات الهندسية المتقدمة في مراحل دراستهم اللاحقة.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. تمكن الطالب من معرفة شرح أساسيات التصميم والرسم بالحاسوب. 2. تمكن الطالب من التعرف على واجهة برنامج AutoCAD وأدواته الرئيسية. 3. تمكن الطالب من تمييز أنواع الرسومات الهندسية المختلفة ومتطلبات إعدادها. 4. تمكن الطالب من إنشاء رسومات هندسية باستخدام أوامر الرسم الأساسية. 5. تمكن الطالب من استخدام أوامر التعديل المختلفة بكفاءة. 6. تمكن الطالب من إدارة الطبقات (Layers) والخصائص الهندسية للرسم. 7. تمكن الطالب من إضافة الأبعاد والنصوص والرموز الفنية. 8. تمكن الطالب من إعداد المخططات للطباعة وفق المقاييس الهندسية المطلوبة. 9. تمكن الطالب من تحليل المشكلات التصميمية واختيار الحلول المناسبة. 10. تمكن الطالب من تحويل الرسومات اليدوية إلى مخططات رقمية دقيقة. 11. تمكن الطالب من تقييم جودة الرسومات الهندسية وتصحيح الأخطاء. 12. تمكن الطالب من معرفة المهارات العامة والمنقولة 13. تمكن الطالب من استخدام الحاسوب والبرمجيات الهندسية بكفاءة. 14. تمكن الطالب من إدارة الوقت أثناء تنفيذ المشاريع التصميمية. 15. تمكن الطالب من إعداد التقارير الفنية وتوثيق الرسومات.

Indicative Contents

المحتويات الإرشادية

المحتويات الإرشادية لمادة الحاسبات 2:

الجزء النظري :

الأسبوع 1-2: مقدمة في AutoCAD

- مفهوم التصميم بمساعدة الحاسوب (CAD).
- مجالات استخدام AutoCAD.
- واجهة البرنامج وإعدادات العمل

الأسبوع 3-5: أوامر الرسم الأساسية

- Line.
- Polyline.
- Circle.
- Arc.
- Rectangle.
- Polygon

الأسبوع 6-7 أوامر التعديل

- Move.
- Copy.
- Rotate.
- Scale.
- Mirror.
- Offset.
- Trim.
- Extend

الأسبوع 8-9 : إدارة الرسم

- Layers.
- Object Properties.
- Object Snap.
- Grid and Snap.
- Coordinate Systems

الأسبوع 10-11: النصوص والأبعاد و الكتل والرموز

- Text و Multiline Text
- Dimension Styles.
- Linear Dimensions.
- Angular Dimensions.
- Annotation
- Blocks.
- Attributes.
- Design Center

الأسبوع 12-13: التخطيط والطباعة

	- Layouts. - Viewports. - Plotting. - إعداد المقاييس الهندسية للطباعة. - الوحدة الثامنة: الأسبوع 14: تطبيقات عملية - رسم مخططات هندسية زراعية. - رسم منشآت ومعدات زراعية بسيطة. الأسبوع 15: مشروع عملي وتقييم نهائي. - مشروع عملي متكامل باستخدام AutoCAD. الجزء العملي : الأسبوع 1-2: مقدمة في AutoCAD (التطبيق على الحاسوب) - مفهوم التصميم بمساعدة الحاسوب. (CAD) - مجالات استخدام AutoCAD. - واجهة البرنامج وإعدادات العمل الأسبوع 3-5: أوامر الرسم الأساسية (التطبيق على الحاسوب) - Line. - Polyline. - Circle. - Arc. - Rectangle. - Polygon الأسبوع 6-7 أوامر التعديل (التطبيق على الحاسوب) - Move. - Copy. - Rotate. - Scale. - Mirror. - Offset. - Trim. - Extend. الأسبوع 8-9 : إدارة الرسم (التطبيق على الحاسوب) - Layers. - Object Properties. - Object Snap. - Grid and Snap. - Coordinate Systems. الأسبوع 10-11: النصوص والأبعاد و الكتل والرموز (التطبيق على الحاسوب) - Text و Multiline Text - Dimension Styles. - Linear Dimensions.
--	---

	- Angular Dimensions. - Annotation. - Blocks. - Attributes. - Design Center. الأسبوع 12-13: التخطيط والطباعة (التطبيق على الحاسوب) - Layouts. - Viewports. - Plotting. - إعداد المقاييس الهندسية للطباعة. - الوحدة الثامنة : الأسبوع 14: تطبيقات عملية (التطبيق على الحاسوب) - رسم مخططات هندسية زراعية. - رسم منشآت ومعدات زراعية بسيطة . الأسبوع 15: مشروع عملي وتقييم نهائي. (التطبيق على الحاسوب) - مشروع عملي متكامل باستخدام AutoCAD.
--	---

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategie	الاستراتيجية الرئيسية التي سيتم اتباعها في تقديم هذه المادة هي تشجيع مشاركة الطلاب في الأنشطة النظرية والعملية، مع التركيز على تنمية مهارات التصميم الهندسي والتفكير التحليلي وحل المشكلات باستخدام الحاسوب. سيتم تحقيق ذلك من خلال المحاضرات التفاعلية، التطبيقات المختبرية، والمشاريع العملية التي تمكن الطلاب من اكتساب الخبرة في استخدام برنامج AutoCAD وإعداد الرسومات الهندسية بدقة وكفاءة. سيتم تحقيق هذه الاستراتيجية من خلال: - المحاضرات التفاعلية: ستوفر المحاضرات الأساس النظري للمادة، وتشمل التعريف بمفاهيم التصميم بمساعدة الحاسوب وأدوات برنامج AutoCAD. وسيتم دعم الشرح باستخدام العروض التقديمية والأمثلة التطبيقية ومقاطع الفيديو التعليمية، مع تشجيع الطلاب على المشاركة وطرح الأسئلة ومناقشة الحلول التصميمية المختلفة. - التطبيقات العملية في المختبر: سيشارك الطلاب في جلسات عملية داخل مختبر الحاسوب لتطبيق المفاهيم النظرية من خلال تنفيذ رسومات هندسية متنوعة. وستشمل هذه الجلسات التدريب على أوامر الرسم والتعديل، وإدارة الطبقات، وإضافة الأبعاد والرموز الفنية، وإعداد المخططات للطباعة. - ورش العمل لحل المشكلات: سيتم اعتماد التعلم القائم على المشكلات من خلال تكليف الطلاب بحل مشكلات تصميمية واقعية تتطلب إنشاء أو تعديل رسومات هندسية وفق متطلبات محددة، مما يساهم في تطوير مهارات التفكير النقدي واتخاذ القرار. - المشاريع الجماعية والتعاون:

	سيكلف الطلاب بتنفيذ مشاريع تصميم جماعية تتطلب إعداد مخططات هندسية متكاملة، مما يعزز مهارات العمل الجماعي والتواصل وتبادل الخبرات بين أفراد المجموعة. 5. استخدام التكنولوجيا الحديثة: سيتم توظيف التقنيات الرقمية الحديثة والموارد التعليمية الإلكترونية، بما في ذلك ملفات التصميم الجاهزة والدروس التعليمية الرقمية، لتمكين الطلاب من تطوير مهاراتهم ومواكبة التطورات في مجال التصميم الهندسي بالحاسوب. 6. التعلم الذاتي والتكليفات المنزلية: سيتم تشجيع الطلاب على تنفيذ واجبات ومشاريع فردية خارج أوقات المحاضرات، والاعتماد على مصادر التعلم الإلكترونية لتطوير قدراتهم في استخدام البرنامج وتعزيز استقلالية التعلم. 7. التقييم والتغذية الراجعة: سيتم إجراء تقييمات دورية تشمل اختبارات عملية قصيرة، وتمارين مختبرية، ومشاريع تصميم، وعروض تقديمية. كما سيتم تقديم تغذية راجعة مستمرة لمساعدة الطلاب على تحسين أدائهم وتطوير مهاراتهم التصميمية. من خلال دمج المعرفة النظرية بالتطبيقات العملية المكثفة، ستسهم هذه المادة في تطوير مهارات الطلاب في الرسم الهندسي والتصميم باستخدام الحاسوب، وإعدادهم لاستخدام برامج التصميم الهندسي بكفاءة في المجالات الأكاديمية والمهنية المستقبلية.
--	---

Student Workload (SWL)			
الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	50	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا	33
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	17	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا	0
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل	100		

Module Evaluation					
تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11

assessment	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
	Material Covered
Week 1	مقدمة في التصميم بمساعدة الحاسوب (CAD)، التعريف ببرنامج AutoCAD، مجالات استخدامه، والتعرف على واجهة البرنامج وإعدادات العمل الأساسية.
Week 2	أنظمة الإحداثيات، أدوات التحكم في العرض، وأساسيات إنشاء الرسومات الهندسية.
Week 3	أوامر الرسم الأساسية (Line, Polyline, Circle, Arc).
Week 4	أوامر الرسم المتقدمة (Rectangle, Polygon, Ellipse) وتطبيقات عملية.
Week 5	أوامر التعديل الأساسية (Move, Copy, Rotate, Mirror).
Week 6	أوامر التعديل المتقدمة (Scale, Stretch, Offset, Array).
Week 7	أوامر Trim و Extend و Fillet و Chamfer وتطبيقاتها العملية.
Week 8	إدارة الطبقات (Layers)، خصائص العناصر (Properties)، وأنظمة المساعدة في الرسم (Grid و Snap و Object Snap).
Week 9	إدراج النصوص الفنية وإعداد أنماط النصوص (Text and MText).
Week 10	إضافة الأبعاد الهندسية (Dimensions) وإعداد أنماط الأبعاد المختلفة.
Week 11	إنشاء الكتل (Blocks)، استخدام السمات (Attributes)، وإدارة المكتبات الهندسية.
Week 12	التعامل مع التخطيطات (Layouts)، وإنشاء نوافذ العرض (Viewports).
Week 13	إعداد الرسومات للطباعة، المقاييس الهندسية، وإخراج المخططات النهائية.
Week 14	تطبيقات متقدمة ومشروع عملي يتضمن إعداد مخطط هندسي متكامل باستخدام AutoCAD.

Week 15	مراجعة شاملة للمادة، عرض ومناقشة المشاريع النهائية، والتقييم النهائي العملي والنظري
---------	---

Delivery Plan (Weekly Lab. Syllabus)	
المناهج الأسبوعي للمختبر	
	Material Covered
Week 1	التعرف على مختبر الحاسوب، تشغيل البرنامج، التعرف على واجهة AutoCAD وإعدادات الرسم الأساسية.
Week 2	التدريب على استخدام نظام الإحداثيات وأدوات التكبير والتصغير والتنقل داخل الرسم.
Week 3	تنفيذ تمارين عملية على أوامر الرسم الأساسية (Line, Polyline, Circle, Arc).
Week 4	رسم أشكال هندسية باستخدام أوامر Rectangle و Polygon و Ellipse.
Week 5	تنفيذ تمارين عملية على أوامر Move و Copy و Rotate و Mirror.
Week 6	تطبيق أوامر Scale و Offset و Array و Stretch على رسومات هندسية مختلفة.
Week 7	تعديل الرسومات باستخدام أوامر Trim و Extend و Fillet و Chamfer.
Week 8	إنشاء وإدارة الطبقات (Layers) وتطبيق إعدادات الألوان وأنواع الخطوط.
Week 9	استخدام أدوات Object Snap و Grid و Snap لتحسين دقة الرسم.
Week 10	إضافة النصوص الفنية والملاحظات الهندسية إلى الرسومات.
Week 11	إضافة الأبعاد الهندسية وضبط أنماط الأبعاد وفق المواصفات القياسية.
Week 12	إنشاء الكتل (Blocks) وإدراجها وتعديلها داخل الرسومات.
Week 13	إعداد التخطيطات (Layouts) وإنشاء نوافذ العرض (Viewports) وتجهيز الرسومات للطباعة.
Week 14	تنفيذ مشروع عملي متكامل يتضمن رسم مخطط هندسي باستخدام الأدوات والمهارات المكتسبة.
Week 15	عرض المشاريع العملية، مناقشتها، وإجراء التقييم العملي النهائي للطلبة

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Bethune, J. D., & Byrnes, D. (2023). Engineering Graphics with AutoCAD 2023. Pearson Education.	no

	ISBN: 9780137929863	
--	---------------------	--

Recommended Texts		Shih, R. H. (2025). Principles and Practice: An Integrated Approach to Engineering Graphics and AutoCAD 2025. SDC Publications.		no	
Grading Scheme					
مخطط الدرجات					
Group	Grade	التقدير	Marks %	Definition	
	A - Excellent	امتياز	90 - 100	Outstanding Performance	
Success Group (50 - 100)	B - Very Good	جيد جدا	80 - 89	Above average with some errors	
	C - Good	جيد	70 - 79	Sound work with notable errors	
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings	
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria	
Fail Group (0 – 49)	FX – Fail	راسب (فيد المعالجة)	(45-49)	More work required but credit awarded	
	F – Fail	راسب	(0-44)	Considerable amount of work required	
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.					

DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Plant Ecology		Module Delivery
Module Type	Core		☒ Theory
Module Code	PLEC212		☒ Lecture
ECTS Credits			☒ Lab
SWL (hr/sem)	2+3		☐ Tutorial
			☐ Practical
			☐ Seminar
Module Level		Second	Semester of Delivery
			Second
Administering Department		Field Crops	College
			College of Agriculture
Module Leader	Name : Dr. Mohanad A. ALSULAIMAN		e-mail
			E-mail: mohanad.alsulaiman@uobasrah.edu.iq
Module Leader's Acad. Title		Assist prof.	Module Leader's Qualification
			Doctoral
Module Tutor	Dr. Mohanad A. ALSULAIMAN Anhar Mahmood Jaaz		e-mail
			mohanad.alsulaiman@uobasrah.edu.iq anhar.jaaz@uobasrah.edu.iq

Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date		Version Number	

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module		Semester	
Co-requisites module		Semester	

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	
Module Learning	The Plant Ecology aims to study the interactions between plants and their

Outcomes	environments, understand plant adaptation mechanisms in response to stressors (such as salinity and drought...etc), and examine the impact of environmental factors on growth and plant distribution. It also seeks to foster environmental awareness and apply ecological knowledge to sustainable agriculture and the improvement of agricultural productivity, alongside the study of ecosystems and the conservation of natural resources.
Indicative Contents	1- Studying Ecosystem: Understanding the composition of plant communities and the interrelationships between plants and their surrounding environment. 2- Study of Climatic and Edaphic Factors: Examining factors such as light, temperature, wind, and soil properties, and their impact on plant growth and distribution. 3- Understanding Adaptation Mechanisms: Identifying the strategies plants employ to adapt to environmental conditions, such as drought, salinity, and high temperatures in order to mitigate adverse effects. 4- Sustainable Agriculture: Applying plant ecology principles to select varieties suited to local environmental conditions and determining minimum water and mineral requirements to maximize productivity. 5- Raising Awareness and Building Skills: Equipping students with the practical skills needed to interact with the environment and fostering awareness regarding the necessity of conserving and protecting natural resources.

	6- Simulation and Analysis: Developing the ability to analyze environmental challenges facing plants and devise scientific solutions.
--	---

Learning and Teaching Strategies	
Strategies	1- The lecture method will be used. 2- The dialogue and discussion method will be adopted. 3- The brainstorming method will be used.

Student Workload (SWL)			
الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل		Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل		Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل			

Module Evaluation					
تقييم المادة الدراسية					
As		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

Week	
Week 1	What is Ecology? What is the concept, classification, dynamics, and interrelationships among environmental factors
Week 2	Climatic factors: components, definitions, and their effects on plants / 1 – Light
Week 3	Climatic factors: components, definitions, and their effects on plants / 2 – Temperature
Week 4	Climatic factors: components, definitions, and their effects on plants / 3- water
Week 5	Climatic factors: components, definitions, and their effects on plants / 3- water
Week 6	Climatic factors: components, definitions, and their effects on plants / 4 - soil
Week 7	Climatic factors: components, definitions, and their effects on plants /5- pressure
Week 8	Climatic factors: components, definitions, and their effects on plants / 6- wind
Week 9	Climatic factors: components, definitions, and their effects on plants / 7- weeds

Week 10	Climatic factors: components, definitions, and their effects on plants / 8-fertilizer
Week 11	Climatic factors: components, definitions, and their effects on plants / 9- competitions
Week 12	Climatic factors: components, definitions, and their effects on plants / 10- soil Topography and Its Influence on Climate Factors and plant growth
Week 13	Environmental factors affecting plant growth / Biotic factors: plant-plant interactions
Week 14	Environmental factors affecting plant growth / Biotic factors: plant-animal interactions

Delivery Plan (Weekly Lab. Syllabus)	
المنهاج الاسبوعي للمختبر	
Week	Material Covered
Week 1	Introduction to meteorological stations
Week 2	Solar radiation measurement instruments and their effects on plant growth
Week 3	Air and soil temperatures equipment and their measurement instruments
Week 4	Temperature regimes, calculations, and effects on plant growth
Week 5	The concept of atmospheric pressure, measuring instruments,

Week 6	Humidity and measuring instruments (air and soil) and their impact on plant growth
Week 7	Evaporation and evaporation measuring instruments
Week 8	Precipitation: rain and dew measuring instruments and Calculating rainfall rates
Week 9	Wind: instruments for measuring wind speed and direction
Week 10	Natural plant environments globally and in Iraq and Forest vegetation globally and in Iraq
Week 11	Field visit to a meteorological station

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	2-Plant Ecology (Arabic Book)	Yes
Recommended Texts	2-Plant Ecology: (Editors: Prof. J.C. Ghildiyal; Prof. G.S. Rajwar; Prof. Lalit M. Tewari; Dr. Hemant Kandpal; Dr. Pooja Juyal)	No

Websites	https://link.springer.com/journal/11258
----------	---

Grading Scheme				
مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 - 49)	FX - Fail	راسب (فيد المعالجة)	(45-49)	More work required but credit awarded
	F - Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information

معلومات المادة الدراسية

Module Title	Oil and sugar crops		Module Delivery		
Module Type	Core		☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar		
Module Code	OSCR214				
ECTS Credits	7				
SWL (hr/sem)	78				
Module Level		2			Semester of Delivery
Administering Department		Field Crops Department	College	College of Agriculture	
Module Leader	Name : Zainab Ahmed Abdel- Razaq		e-mail	E-mail: zainab.ahmed@uobasrah.edu.iq	
Module Leader's Acad. Title		lecture	Module Leader's Qualification		Ph. D.
Module Tutor	Zainab Ahmed Abdel- Razaq		e-mail	zainab.ahmed@uobasrah.edu.iq	
Peer Reviewer Name		Name	e-mail	E-mail	

Scientific Committee Approval Date		Version Number	0.1
------------------------------------	--	----------------	-----

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	1- Providing students with theoretical and applied information in the field of cultivation and production of major oil crops, as well as the characteristics and aspects of oil manufacturing. 2- Providing students with theoretical and applied information in the field of cultivation and production of the main sugar crops, as well as the processes of sugar extraction and manufacturing.

	3- The student should have knowledge of oil and sugar crops and their economic importance. 4 -Understanding the suitable environmental conditions for both oilseed and sugar crops under study. 5- Identifying the most important agricultural practices for oil and sugar crops.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1 .To explain to students the importance of oilseed crops, provide them with information about these crops, and enable them to identify the purpose of cultivating them. 2 .To distinguish the characteristics of oils, enabling students to identify their physical and chemical properties. 3 .To explain oil extraction methods, enabling students to perform various oil extraction techniques. 4 .To explain the environmental conditions and their role in the growth, yield, and quality of oilseed crops, including sesame. 5. To explain the impact of environmental conditions and their role in the growth of newly cultivated oilseed crops in the region, such as rapeseed and mustard. 6 .Demonstrates to students the success of newly cultivated oilseed crops in the region, such as safflower, and their economic importance. 7 .Explains the environmental and agricultural requirements for

	cotton and flax crops to determine crop management practices. 8 .Explains the importance of sugar crops and provides an introduction to sugar crops (a brief overview of the history of sugar crops in general). 9 .Demonstrates the climatic requirements for sugarcane and provides a brief overview of the plant's development and native habitat. 10 .Explains the factors affecting cuttings and suitable soil, planting date, seed quantity, and the necessary crop management practices (irrigation and fertilization). 11. Explains the importance of sugar beet crop. 12- It explains the climatic requirements and agricultural processes of sugar beets.
Indicative Contents المحتويات الإرشادية	The course on oilseed and sugar crops covers several key topics: 1 -Definition of oilseed crops and identification of the physical and chemical properties of oils 2 -Identification of the most important oilseed crops, their economic significance, and the suitable environmental conditions for each crop 3 -Introduction to the important agricultural practices in oilseed production

	4 -Definition of sugar crops 5 -Identification of the most important sugar crops, their economic significance, and the suitable environmental conditions for each crop 6- Introduction to the important agricultural practices in sugar crop production
--	---

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The lesson includes (2) hours of theory and (3) hours of practical - the number of weekly hours is approved, distributed over 15 weeks The main strategy employed in teaching this unit is to encourage student participation in discussion, alongside a series of lectures and practical lessons designed to introduce them to oilseed and sugar crops. Simultaneously, their critical thinking skills will be refined and expanded through topics covered in the lectures, including the nature of oilseed crops, the nature of sugar crops, the optimal growing conditions for these crops, and the agricultural practices involved.

Student Workload (SWL)			
الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	78	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا	5
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	97	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا	7
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل	175		

Module Evaluation					
تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7

	Projects / Lab.	1	10% (10)	Continuou s	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
Week 1	Definition of oil crops, the importance of oil crops, production of oil crops, trade in fats and oils, sources of oils and fats

Week 2	Physical and chemical properties of oils and fats. Components of oils, fatty acids - glycerides‘ Partition of oils and fats, composition and representation of oils and fats in crops
Week 3	Methods of extracting oils and fats. Problems and obstacles to the cultivation and production of oil crops and means of overcoming them
Week 4	Study of oil crops Sesame, sunflower (English and scientific name and family, economic importance - original habitat - environmental conditions - soil and crop service processes - harvesting) Peanut, soybean (English and scientific name and family, economic importance - original habitat - environmental conditions - soil and crop service processes - harvesting)..
Week 5	Exam1
Week 6	Rape and mustard (English and scientific name and family, economic importance - original habitat - environmental conditions - soil and crop service processes - harvesting).
Week 7	Safflower, (English and scientific name and family, economic importance - original habitat - environmental conditions - soil and crop service processes - harvesting).

Week 8	Cotton and flax (English and scientific name and family, economic importance - habitat - environmental conditions - soil and crop service processes - harvesting).
Week 9	A scientific visit to one of the fields affiliated with the Basra Agriculture Directorate to see some of the cultivated oil crops.
Week 10	Sugar crops Introduction (a brief overview of the history of sugar crops in general)
Week 11	Sugarcane (English and scientific name and family(A brief overview of the plant's development and its original habitat. Geographical distribution Climatic needs
Week 12	Suitable soil, planting time - seed quantity - factors affecting cuttings. Crop service operations (irrigation - fertilization)
Week 13	Sugar beet (English and scientific name and family(Introduction to the development of the sugar beet plant - the original habitat - economic importance and geographical distribution - sugar extraction and oil development.

Week 14	Plant climatic needs, Agricultural operations (suitable soil - planting time - planting method.(Suitable conditions for seed germination - seed quantity - agricultural cycle Crop service operations (thinning operations, weeding, fertilization, harrowing and uprooting(
Week 15	Exam2

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Definition of field crops - division of field crops - definition of oil crops - how oil is formed in plant seeds and the composition of oils and fatty acids
Week 2	Introduction to the Soxolite device (a device for extracting oil from seeds), its history, parts, and how to extract oil

Week 3	Sunflower and its botanical description
Week 4	Corn(Maize) crop and its botanical description
Week 5	Exam1
Week 6	Soybean and its botanical description Peanut and its botanical description
Week 7	Safflower and its botanical description
Week 8	Rapesed and its botanical description
Week 9	A scientific visit to one of the fields affiliated with the Basra Agriculture Directorate to see some of the cultivated oil crops.
Week 10	Cotton and its botanical description
Week 11	Flax crop and its botanical description
Week 12	View live samples of some oil crops and identify their seeds

Week 13	Sugar plants (sugarcane) and its botanical description
Week 14	Sugar beet yield and its botanical description
Week 15	Exam2

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Oil and sugar crops)Dr.. Tawakkol Younis Rizk Dr. Hikmat Abdul Ali.(Oilseeds Tayfour, Hussein Awni and Rizgar Hamdi Rashid .(1990) . Ministry of Higher Education and Scientific	yes
Recommended Texts		
Websites	Websites specializing in oilseed and sugar crops	

Grading Scheme مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 – 89	Above average with some errors
	C – Good	جيد	70 – 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 – 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 – 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				