Program Catalogue | 2025-2026 |

Wasit University

First Cycle – Bachelor's Degree (B.Sc.) – Plant Protection

Academic Program Description Form

University Name: wasit

Faculty/Institute: Agricultura

Scientific Department: Plant protection

Academic or Professional Program Name: Plant protection

Final Certificate Name: Plant protection

Academic System: Bologna

Description Preparation Date: 2/11/2025

File Completion Date: 10/3/2026

Signature: جامعة واسط كلية الزراعة قسم وقاية النبات

Head of Department Name: Dr. Hasan Hadi Faraj

Date: 10/3/2026

Signature:

Scientific Associate Name: Wissam Thaer

Date: 10/3/2026

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department: Hibat Allah A. Hussein

Date: 10/3/2026

Signature:

Assist. Prof
Dr. Hakeem S. Abed
Dean

Approval of the Dean

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1. Mission & Vision Statement

Vision Statement

The Department of Plant Protection aspires to be among the best departments in terms of learning and scientific research, providing valuable scientific advice and consultations that contribute to raising agricultural yields to the highest levels and protecting crops from the threat of numerous pests that threaten them, for the benefit of Iraqi society, most notably insects and plant diseases of various kinds.

Mission Statement

• To provide high-quality education that equips students with the scientific knowledge and practical skills necessary for work in the field of insect pest and disease control, research, and public service.

• To promote scientific research in the fields of agricultural pest management and treatment to address current and future challenges.

• To enhance cooperation with industry, government, and communities to ensure the development of pest control methods in a safe, sustainable manner.

• To promote innovation, critical thinking, and lifelong learning among students and plant protection professionals.

2. Program Specification

Program code:	BSc-FS	**ECTS**	240

Duration:	4 levels, 8 Semesters	Method of Attendance:	Full Time

At Level 1, students are introduced to the fundamental principles of the Department of Plant Protection, providing a solid foundation for all programs within the Entomology and Pathology specialization group. At Level 2, core topics related to the chosen specialization are explored, preparing students for the advanced, research-based specialized courses at Levels 3 and 4. Thus, Entomology and Pathology graduates are trained to appreciate the importance of evidence-based learning and understand how research drives innovation in plant protection science, in line with the mission statements of the University and the College.

From Level 2, students can customize their study path by selecting a variety of modules, ensuring a balanced understanding of topics in biotechnology, microbiology, and the taxonomy of insects and plant fungi. This structure allows students to develop their own academic interests while meeting the depth and breadth of knowledge required for graduate study. These modules are selected in consultation with academic advisors.

A research approach is integrated into the program from the outset, through practical laboratory work included in lectures, dedicated practical sessions, research seminars, and small group lessons. There is a mandatory field trip or industrial visit at Level 1, which students must complete to advance to Level 2, with similar optional opportunities at Levels 2, 3, and 4. At Level 4, all students complete an independent research project, which may be a literature review, data analysis, or an experimental project conducted in the laboratory or at an experimental station. Tutoring at Levels 1 and 2 is led by the same tutor, who also serves as a personal academic advisor, ensuring continuity and personalized support. These include workshops to develop key skills such as scientific writing, data analysis, and presentation techniques, followed by assessed tasks such as essays, project proposals, or presentations, providing students with a platform to develop and demonstrate these skills within the context of plant protection.

3. Program Objectives

1. Knowledge among all segments of society about the importance and safety of agricultural products, such as ensuring that crops are free of plant diseases and pesticide residues, etc.

2. Conduct scientific research to develop the agricultural sector, solve its problems, and combat pests, particularly research that contributes to finding alternative solutions to the use of chemical pesticides.

3. Increase agricultural awareness among agricultural workers and disseminate up-to-date information to obtain the best agricultural products.

4. Cooperate with other government agencies, such as extension and research centers and agricultural directorates, to exchange expertise and knowledge and keep abreast of the latest developments in the field of agriculture and plant protection.

5. Work with the public and private sectors, farmers, various organizations, and individuals to develop applications used in the field of plant protection.

4. Student Learning Outcomes

1- The vision, goals, and mission of the department can be achieved through the distinguished staff of the Plant Protection Department and by supporting the production process with the latest research and studies that can contribute to consolidating and increasing the quantity and quality of production in Wasit Province, the governorate with the highest agricultural production density.

2- The department's graduates can be made more skilled and experienced, meeting the requirements of the labor market.

3- The expertise of the teaching staff can be utilized to update the curricula of the academic subjects to meet the requirements of protecting agricultural fields in Wasit Province.

4- The department has a vision: The Plant Protection Department aspires to be among the best departments in learning and scientific research, providing valuable scientific advice and consultations that contribute to raising agricultural production to the highest levels and protecting crops from the threat of numerous pests that threaten them, for the benefit of Iraqi society, most notably insects and plant diseases of various types.

5. Academic Staff

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6. Credits, Grading and GPA

Credits

Wasit University is following the Bologna Process with the European Credit Transfer System (ECTS) credit system. The total degree program number of ECTS is 240, 30 ECTS per semester. 1 ECTS is equivalent to 25 hrs student workload, including structured and unstructured workload.

Grading

Before the evaluation, the results are divided into two subgroups: pass and fail. Therefore, the results are independent of the students who failed a course. The grading system is defined as follows:

GRADING SCHEME مخطط الدرجات				
Group	**Grade**	التقدير	**Marks (%)**	**Definition**
Success Group	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors

(50 - 100)	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:				

Number 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.

Calculation of the Cumulative Grade Point Average (CGPA)

1. The CGPA is calculated by the summation of each module score multiplied by its ECTS, all are divided by the program total ECTS.

   CGPA of a 4-year B.Sc. degree:

   CGPA = [(1st ^{m}odule score x ECTS) + (2nd ^{m}odule score x ECTS) + ……] / 240

7. Curriculum/Modules

Semester 1 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
AGR111	General Chemistry	79	96	7	C	
AGRI112	Principles of Soil	79	96	7	C	
UNIV101	English Language	34	66	4	B	
UNIV103	Computers 1	79	96	7	C	
UNIV104	Democracy and Human Rights	50	25	3	B	
PP-111	Principles of Plant Protection	33	17	2	B	

Semester 2 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
PP121	General Insects	78	97	7	B	
UNI102	Arabic Language	78	97	7	B	
AGR112	Principles of Horticulture	78	97	7	C	
AGR122	Principles of Field Crops	78	47	5	B	
AGR121	Agricultural Economics	32	18	2	B	

PP122	Non-Insect Animals	33	17	2	S	

Semester 3 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
AGR221	Principles of Statistics	78	97	6	B	
PP221	Medical and Veterinary Entomology	78	97	7	C	
AGR222	Agricultural Extension	78	97	5	B	
UNI221	Arabic Language 2	78	47	2	B	
PP222	Pest Control Machinery and Equipment	32	18	4	B	
PP223	Plant Physiology	33	17	4	S	
UNI222	Democracy and human rights	33	17	2	S	

Semester 4 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
PP211	Insect Classification	78	97	7	B	
PP212	Saprophytic Insects	78	97	7	C	
PP213	Principles of Microbiology	78	97	5	B	
AGR 211	Analytical Chemistry	78	47	5	B	
UNI 211	English Language 2	32	18	2	B	
PP 114	Plant Ecology	33	17	2	S	
UNI 212		33	17	2	S	

8. Contact

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Wasit University
جامعة واسط

First Cycle – Bachelor's Degree (B.Sc.) – Plant Protection

بكالوريوس – وقاية نبات

Table of Contents

1. Overview

This catalogue is about the courses (modules) given by the program of plant protection to gain the Bachelor of Science degree. The program delivers (48) Modules with (6000) total student workload hours and 240 total ECTS. The module delivery is based on the Bologna Process.

نظرة عامة

يتناول هذا الدليل المواد الدراسية التي يقدمها برنامج وقاية النبات للحصول على درجة بكالوريوس العلوم. يقدم البرنامج (48) مادة دراسية، مع (6000) إجمالي ساعات حمل الطالب و240 إجمالي وحدات أوروبية. يعتمد تقديم المواد الدراسية على عملية بولونيا.

2. Undergraduate Courses 2024-2025

Module 1

Code	Course/Module Title	ECTS	Semester
AGR-111	General Chemistry	8	1
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	3	80	120
Description			
This course introduces students to the fundamental principles, methods, and applications of **analytical chemistry**. It covers both **qualitative** and **quantitative** analysis, focusing on the theory and practice of chemical measurements. Topics include classical methods such as **gravimetric** and **volumetric analysis**, as well as modern instrumental techniques including **spectrophotometry**, **chromatography**, and **electrochemical analysis**. Students will gain hands-on experience in laboratory techniques, data interpretation, error analysis, and the application of analytical methods in real-world contexts, such as environmental, pharmaceutical, agricultural, and industrial analysis. The course aims to develop students' ability to solve chemical problems through analytical thinking, proper experimental design, and accurate data reporting.			

Module 2

Code	Course/Module Title	ECTS	Semester
PP-113	Principles of Protection	8	1
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	3	123	77
Description			
This course provides students with a comprehensive introduction to the **principles of dairy science**,			

focusing on the production, composition, processing, and quality control of milk and dairy products. It covers the **biological and chemical properties of milk**, factors influencing milk yield and quality, and an overview of **dairy herd management**. Students will also study **processing techniques** for various dairy products such as cheese, yogurt, butter, and powdered milk, with emphasis on **hygiene, safety, and quality assurance standards**.
The course integrates both theoretical and practical knowledge, preparing students to understand the role of dairy science in human nutrition, public health, and industry systems.

Module 3

Code	Course/Module Title	ECTS	Semester
WU04	Human Rights and Democracy	2	1
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	0	32	18
Description			
This course introduces students to the basic concepts and principles of **agricultural economics**, focusing on the application of economic theory to the agriculture sector. It explores the **economic behavior of individuals, firms, and governments** in relation to agricultural production, distribution, and consumption. Topics include **supply and demand in agriculture**, **production economics**, **farm management**, **market structures**, **price analysis**, **agricultural policy**, and **resource use in farming**. Special emphasis is placed on the role of agriculture in national economic development and sustainability. Students will learn how to apply economic tools to solve real-world problems in farming, agribusiness, and rural development.			

Module 4

Code	Course/Module Title	ECTS	Semester
WU04	Computer 1	3	1
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	3	37	38
Description			
This course introduces students to the fundamental concepts of **organic chemistry**, which is the study of the structure, properties, composition, reactions, and preparation of compounds containing carbon. Topics include the classification and nomenclature of organic compounds, structure and bonding, functional groups, reaction mechanisms, stereochemistry, and the chemistry of alkanes, alkenes, alkynes, alcohols, acids, esters, amines, and aromatic compounds. The course emphasizes both theoretical understanding and practical applications, especially in fields such as **agriculture**, **pharmaceuticals**, **biochemistry**, and **environmental science**. Laboratory sessions (if applicable) focus on the safe handling, synthesis, and identification of organic compounds using classical and modern techniques.			

Module 5

Code	Course/Module Title	ECTS	Semester
WOU2	Academic English 1	2	1
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
0	3	35	15
Description			
This course introduces students to the **fundamentals of computer programming**, with a focus on developing skills using a program such as **Office**. It covers basic concepts including **data types**, **variables**, **input/output operations**, **control structures** (such as loops and conditionals), **functions**, **arrays**, and **simple data structures**. Students will learn to design, write, test, and debug computer programs. The course aims to build computational thinking skills and demonstrate how programming can be used to solve real-world problems, including applications in **agriculture**, **science**, **data analysis**, and **automation**.			

Module 6

Code	Course/Module Title	ECTS	Semester
AGR-112	principles of soil	7	1
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	0	102	73
Description			
This course introduces students to the core concepts, principles, and practices of **democracy and human rights** at the national and international levels. It explores the **development of democratic systems**, the **rule of law**, **citizenship**, **civil liberties**, **political participation**, and the **protection of individual and collective rights**. Students will study major human rights declarations and conventions, such as the **Universal Declaration of Human Rights**, and the roles of international organizations in promoting justice and equality. Through discussions, case studies, and interactive activities, the course aims to strengthen students' awareness of their **rights and responsibilities** as citizens and to encourage **active participation** in democratic processes.			

Module 7

Code	Course/Module Title	ECTS	Semester
PP-121	Entomology	7	2
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	3	102	73
Description			

This course introduces students to the **fundamentals of machines and engineering workshop practices**, with a focus on the operation, maintenance, and practical use of **agricultural and mechanical machinery**. It covers basic concepts of **mechanical systems**, **tools**, **machine components**, and **workshop safety procedures**. Students will gain hands-on experience in the **use of lathes, welding tools, cutting tools, drilling machines**, and other common workshop equipment.
The course emphasizes the role of machines in agricultural productivity and technical industries, teaching students how to operate, maintain, and troubleshoot simple machines and tools used in various fields.

Module 8

Code	Course/Module Title	ECTS	Semester
AGR-122	Principles of Field Crops	5	2
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	3	103	22
Description			
This course provides an introduction to the **science of microbiology**, focusing on the structure, classification, physiology, and functions of microorganisms, including **bacteria, viruses, fungi, protozoa**, and **algae**. It explores their roles in **health, agriculture, industry, and the environment**. Topics include microbial growth, nutrition, reproduction, metabolism, genetic variation, and methods of microbial control. Special attention is given to **beneficial and harmful microorganisms** in agriculture, food production, and animal health. The laboratory component involves techniques such as **microscopy, staining, culturing, isolation**, and **identification** of microbes.			

Module 9

Code	Course/Module Title	ECTS	Semester
PP-122	Non-insect animal pests	7	2
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	3	104	71
Description			
This course introduces students to the fundamentals of covering the principles and methods used in the processing, preservation, packaging, storage, and quality control of various. Topics include the industrial production of dairy products, meat, poultry, cereals, oils, fruits, and vegetables. Emphasis is placed on food safety standards, hygienic practices, processing equipment, and the role of technology in improving shelf life, nutritional value, and consumer appeal. Students will gain both theoretical knowledge and practical skills needed for understanding modern operations, enabling them to apply these principles in real-world agricultural and industrial settings.			

Module 10

Code	Course/Module Title	ECTS	Semester

AGR-121	Agricultural economics	3	2
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2		53	22
Description			
This course introduces the **basic principles of statistics** and their applications in scientific research, particularly in agriculture, biology, and related fields. It covers topics such as **data collection**, **organization**, **presentation**, **measures of central tendency and dispersion**, **probability distributions**, **hypothesis testing**, **correlation**, **regression**, and **analysis of variance (ANOVA)**. Students will learn to use statistical tools and software to analyze and interpret data, supporting scientific conclusions and decision-making. Emphasis is placed on **practical applications**, problem-solving, and understanding the role of statistics in research and industry.			

Module 11

Code	Course/Module Title	ECTS	Semester
AGR-112	principles of Horticulture	6	2
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	3	100	50
Description			
This course is designed to develop students' **academic English language skills**, with a focus on enhancing their **reading, writing, listening, and speaking** abilities in an academic context. Emphasis is placed on **vocabulary development**, **grammar accuracy**, **sentence and paragraph structure**, and **basic academic writing techniques**. Students will engage with a variety of texts and practice language skills through structured activities that build confidence in understanding and using English in university and professional settings. The course prepares students for future academic success by strengthening their ability to comprehend lectures, write assignments, participate in discussions, and read academic materials effectively.			

Module 12

Code	Course/Module Title	ECTS	Semester
WU01	Arabic Language	2	2
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	0	34	16
Description			
This course aims to strengthen students' skills in the **Arabic language**, focusing on improving their abilities in **reading, writing, grammar, and comprehension**. It provides a foundation in **classical and modern standard Arabic**, with attention to **sentence structure, correct usage, punctuation**, and **writing techniques**. The course also introduces students to selected texts from **Arabic literature,**			

culture, and heritage, enhancing their appreciation for the richness and depth of the Arabic language. Students will practice writing essays, analyzing texts, and applying grammatical rules accurately, enabling them to communicate effectively in academic and professional contexts.

Contact

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MODULE DESCRIPTION FORM

Module Information					
Module Title	Democracy and human rights			**Module Delivery**	
Module Type	S			☒ **Theory** ☒ **Lecture** ☐ **Lab** ☐ **Tutorial** ☒ **Practical** ☐ **Seminar**	
Module Code	WU04				
ECTS Credits	2				
SWL (hr/sem)	50				
Module Level	1		**Semester of Delivery**	1	
Administering Department	Plant protection		**College**	College of Agriculture	
Module Leader	Farid Jassim Hassan		**e-mail**	FaredalHadabi@uowasit.edu.iq	
Module Leader's Acad. Title	Assist. Lecturer		**Module Leader's Qualification**	MSc	
Module Tutor			**e-mail**		
Peer Reviewer Name	Name		**e-mail**	E-mail	
Scientific Committee Approval Date	14/10/2025		**Version Number**	1.0	

Relation with other Modules			
Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	1. **Introduce students to the concept of democracy**, its historical development, various forms, and mechanisms of implementation in modern political systems. 2. **Enhance students' awareness of human rights**, including their definition, types (civil, political, economic, social, cultural), and the international and local sources that protect these rights. 3. **Promote a culture of tolerance and active citizenship** among students, and encourage respect for others' opinions and political and cultural pluralism. 4. **Enable students to distinguish between democratic and non-democratic systems**, analyze their characteristics, and assess their impact on societies. 5. **Highlight the role of national and international institutions** in the protection and promotion of human rights.

	6. **Introduce students to international human rights declarations and conventions**, such as the Universal Declaration of Human Rights and the two International Covenants. 7. **Encourage students to participate in public life** and practice their political and civil rights with awareness and responsibility. 8. **Develop students' critical thinking** regarding contemporary issues related to freedom, justice, equality, and the rights of vulnerable and marginalized groups.
Module Learning Outcomes	1. **Explain the basic concepts of democracy and human rights**, and distinguish them from similar or overlapping concepts. 2. **Analyze the development of democratic thought throughout history**, and identify its forms and contemporary applications. 3. **Identify the types of human rights** (civil, political, economic, social, cultural) and their international and local legal sources. 4. **Evaluate the role of national and international organizations** in the protection and promotion of human rights, such as the United Nations, international courts, and civil society organizations. 5. **Compare democratic and non-democratic systems** in terms of structure, function, and their impact on public freedoms. 6. **Apply democratic principles in university and community life**, through respect for others' opinions, teamwork, and active participation. 7. **Recognize human rights violations** in various contexts and be able to propose humanitarian and legal solutions or alternatives. 8. **Demonstrate ethical and humanitarian commitment** to issues related to equality, justice, and the rights of vulnerable and marginalized groups in society.
Indicative Contents	1. **Introduction to Democracy and Human Rights** o Basic concepts o Importance and objectives 2. **Origin and Development of Democracy** o Historical roots o Contemporary models of democracy 3. **Forms of Democracy** o Direct democracy o Representative democracy 4. **Human Rights: Concept and Characteristics** o Classifications (civil, political, economic...) o Fundamental principles (dignity, equality, freedom) 5. **International Human Rights Instruments** o The Universal Declaration of Human Rights o The International Covenant on Civil and Political Rights o The International Covenant on Economic, Social and Cultural Rights 6. **Mechanisms for the Protection of Human Rights** o Nationally (constitution, judiciary) o Internationally (United Nations, international organizations) 7. **Democracy and Human Rights in the Arab Context** o Challenges and opportunities

	○ Positive and negative examples 8. **The Role of Citizens in a Democratic System** ○ Political participation ○ Social responsibility 9. **Contemporary Human Rights Issues** ○ Women's rights ○ Children's rights ○ Freedom of expression 10. **Conclusion and General Evaluation** ○ Comprehensive review ○ Open discussions and practical applications

Learning and Teaching Strategies

Strategies	• **Interactive lectures**: To present basic concepts and theories in a simplified and clear manner. • **Brainstorming and classroom discussions**: To stimulate critical thinking and promote the exchange of ideas. • **Case studies**: To analyze real-life situations related to human rights and democracy. • **Group work**: To develop a spirit of cooperation and dialogue among students. • **Student presentations**: To enhance communication and research skills. • **Field visits or meetings with human rights organizations (if possible)**: To connect theory with practical application. • **Use of multimedia**: Such as videos and documents to showcase examples of the struggle for democracy and human rights. • **Short reports and research papers**: To encourage self-learning and deepen understanding.

Student Workload (SWL)

Structured SWL (h/sem)	33	**Structured SWL (h/w)**	3
Unstructured SWL (h/sem)	17	**Unstructured SWL (h/w)**	1
Total SWL (h/sem)	**50**		

Module Evaluation

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	**Tests**	1	10% (10)	7	LO #1 - #6
	Projects	1	10% (10)	15	LO #1 -#15

	Lab	1	10% (10)	8	LO #1 - #7
	Reports	1	10% (10)	15	LO #1 - #14
Summative assessment	**Mid Exam**	2hr	10% (10)	7	LO #1 - #6
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

	Material Covered
Week 1	Definition of Human Rights
Week 2	Origin and Development of the Concept of Human Rights
Week 3	Overview of Human Rights in Ancient Civilizations (Mesopotamia, Nile Valley)
Week 4	Human Rights in Divine Religions
Week 5	Human Rights and Their Relation to Other Variables
Week 6	Relationship Between Rights and Law
Week 7	Relationship Between Rights and Duties
Week 8	Key Fundamental Human Rights
Week 9	Impact of Globalization on Human Rights
Week 10	Major International Declarations and Conventions on Human Rights
Week 11	Universal Declaration of Human Rights (1948)
Week 12	Cairo Declaration on Human Rights in Islam
Week 13	Human Rights in International Charters and Laws
Week 14	International Covenant on Civil and Political Rights
Week 15	Financial and Administrative Corruption

Learning and Teaching Resources

	Text	**Available in the Library?**
Required Texts	Theory and practical lectures	Yes
Recommended Texts	Human rights Book	Yes
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
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Fail Group (0 – 49)	**FX –** Fail		(45-49)	More work required but credit awarded
	F – Fail		(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 7

Code	Course/Module Title	ECTS	Semester
AGR123	Machines and Workshops	7	2
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	3	78	97

Description

This course introduces students to the **fundamentals of machines and engineering workshop practices**, with a focus on the operation, maintenance, and practical use of **agricultural and mechanical machinery**. It covers basic concepts of **mechanical systems**, **tools**, **machine components**, and **workshop safety procedures**. Students will gain hands-on experience in the **use of lathes, welding tools, cutting tools, drilling machines**, and other common workshop equipment.

The course emphasizes the role of machines in agricultural productivity and technical industries, teaching students how to operate, maintain, and troubleshoot simple machines and tools used in various fields.

MODULE DESCRIPTION FORM

Module Information					
Module Title	English Language			**Module Delivery**	
Module Type	Basic			☒ **Theory** ☒ **Lecture** ☐**Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	WU02				
ECTS Credits	2				
SWL (hr/sem)	50				
Module Level	1		**Semester of Delivery**	2	
Administering Department	Plant protection		**College**	College of Agriculture	
Module Leader	Enam Kazem Abbas		**e-mail**	lalshahmani@uowasit.edu.iq	
Module Leader's Acad. Title	Lecturer		**Module Leader's Qualification**	PhD	
Module Tutor			**e-mail**		
Peer Reviewer Name			**e-mail**		
Scientific Committee Approval Date	14/10/2025		**Version Number**	1.0	

Relation with other Modules			
Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	to enable the learner to communicate effectively and appropriately in real life situation: b. to use English effectively for study purpose across the curriculum; c. to develop interest in and appreciation of Literature; d. to develop and integrate the use of the four language skills i.e. Reading, Listening, Speaking and Writing; e. to revise and reinforce structure already learnt.
Module Learning	to develop the students' abilities in grammar, oral skills, reading, and study skills

Outcomes	1. Students will increase their awareness of correct usage of English grammar in writing and speaking. 2. Improve their speaking ability in English both in terms of fluency and comprehensibility. 3. Receive feedback on their performance through oral presentations. 4. Increase their reading speed and comprehension of academic articles. 5. improve their reading fluency skills through extensive reading. 6. Expand their vocabulary by keeping a vocabulary journal. 7. strengthen their ability to write academic papers, essays and summaries using the process approach.
Indicative Contents	The course aims to develop communicative competence in English for intercultural contexts by teaching language items and communicative strategies essential for such scenarios, while at the same time giving students ample chances to output such items. The aims of this course are reflected in the content, which contains several themes, such as cultural awareness, intercultural awareness and English as a global language. Indicative content includes understanding the uniqueness of your own culture and other cultures, as well as being aware of the role culture plays in communication in English as a global language. In addition, this course allows for discussions about what it means for English to be a global language of communication and how misunderstandings and miscommunications when using English occurs. The course also includes practice in the pronunciation features that help improve intelligibility in intercultural contexts, namely the Lingua Franca Core.

Learning and Teaching Strategies	
Strategies	1. Cultivate relationships Speaking with students to know each student, helps you understand who they are, where they come from and, perhaps, gain some insight into what teaching and learning styles are most effective for them. 2. Teach language skills across all curriculum topics 3. Speak slowly and be patient: Speaking in a slower, measured cadence Being a bit more aware of your pronunciation 4. Prioritize “productive language” 5. Using a variety of methods to engage learning 6. Using visual aids by the use of pictures, diagrams, charts and other visual tools. 7. Coordinate with the ESL teacher: Such discussions can yield insights into individual students and their learning styles or challenges; they can also be helpful for sharing information about curriculum topics, potentially providing ESL teachers with ideas for highly relevant vocabulary words that can reinforce academic lessons. 8. Pre-teach new vocabulary words that may be unfamiliar to ELLs, or even to give them a copy of the article or link to the material ahead of time. 9. Build in some group work. 10. Respect moments of silence: Many new language learners tend to be a little reticent and quiet, opting for silence over speaking up and saying something “wrong” in a language that is still unfamiliar. Research-based

	strategies for differentiating instruction to promote student learning

Student Workload (SWL)			
Structured SWL (h/sem)	33	**Structured SWL (h/w)**	2
Unstructured SWL (h/sem)	17	**Unstructured SWL (h/w)**	1
Total SWL (h/sem)	50		

Module Evaluation					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	10% (10)	3,6,9	LO #1, #7
	Assignments	2	10% (10)	10	LO #3, #4 and #6
	Projects / Lab.	0	0 %		
	Essays	1	10% (10)	14	LO #5
Summative assessment	**Midterm Exam**	2hr	20% (10)	7	LO #1 - #7
	Final Exam	2hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	Unit-1 (Hello)
Week 2	Unit-2 (Your world)
Week 3	Unit-3 (Personal information)
Week 4	Unit-4 (Family and friends)
Week 5	Unit-5 (It's my life)
Week 6	Unit-6 (Every day)
Week 7	**Mid-term Exam**
Week 8	Unit-7 (Places I like)
Week 9	Unit-8 (Where I live)
Week 10	Unit-9 (Happy birthday)
Week 11	Unit-10 (We had a good time)
Week 12	Unit-11 (we can do it)

Week 13	Unit-12 (Thank you very much)
Week 14	Unit-13 (Here and now)
Week 15	Unit-14 (It's time to go)

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts	Headway. Beginner. Student's Book by Liz and John Soars, 2019.	Yes
Recommended Texts		No
Websites	https://elt.oup.com/student/headway/beg/?cc=global&selLanguage=en	

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

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 12

Code	**Course/Module Title**	**ECTS**	**Semester**
WU01	Arabic Language	2	2
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	0	33	17

Description
This course aims to strengthen students' skills in the **Arabic language**, focusing on improving their abilities in **reading, writing, grammar, and comprehension**. It provides a foundation in **classical and modern standard Arabic**, with attention to **sentence structure, correct usage, punctuation**, and **writing techniques**. The course also introduces students to selected texts from **Arabic literature, culture, and heritage**, enhancing their appreciation for the richness and depth of the Arabic language. Students will practice writing essays, analyzing texts, and applying grammatical rules accurately, enabling them to communicate effectively in academic and professional contexts.

MODULE DESCRIPTION FORM

Module Information					
Module Title	Arabic Language			**Module Delivery**	
Module Type	S			☐**Theory** ☒ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	WU01				
ECTS Credits	2				
SWL (hr/sem)	50				
Module Level		1	**Semester of Delivery**		2
Administering Department		Plant protection	**College**	College of Agriculture	
Module Leader	Arkan Musa		**e-mail**		
Module Leader's Acad. Title		Assist. Lecturer	**Module Leader's Qualification**		Master degree
Module Tutor			**e-mail**		
Peer Reviewer Name		Name	**e-mail**	E-mail	
Scientific Committee Approval Date		3/03/2026	**Version Number**	1.0	

Relation with other Modules			
Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	1. To develop the basic language skills of the student: listening, speaking, reading, and writing. 2. To enhance the ability to express orally and in writing using correct and proper Arabic. 3. To expand the student's vocabulary through the study of new words and structures.

	4. To improve reading comprehension and literary analysis skills across various text types (narrative, poetic, and expository). 5. To familiarize students with essential grammar and spelling rules and apply them accurately. 6. To foster a sense of belonging and appreciation for the Arabic language as a language of religion, culture, and identity. 7. To train students in critical and analytical thinking skills through text discussions and interpretation. 8. To expose students to examples of classical and modern Arabic literature to appreciate the beauty and history of the language.
Module Learning Outcomes	1. The student will distinguish between different types of literary and linguistic texts. 2. The student will correctly apply grammar and spelling rules in writing and speaking. 3. The student will analyze written texts from both linguistic and literary perspectives. 4. The student will compose coherent and grammatically correct paragraphs or essays in Arabic. 5. The student will read texts aloud with proper pronunciation and expression. 6. The student will express opinions and ideas orally using clear and correct language. 7. The student will relate what they learn in Arabic to their daily life or academic specialization. 8. The student will demonstrate appreciation for the role of the Arabic language in shaping cultural and religious identity.
Indicative Contents	1. Introduction to the importance and status of the Arabic language. 2. Types of texts: narrative, descriptive, expository, persuasive, poetic. 3. Reading skills and reading comprehension. 4. Writing skills: paragraph writing, essay writing, letter writing. 5. Grammar and morphology: nominal and verbal sentences, subjects and objects, diptotes. 6. Spelling rules and punctuation marks. 7. Oral expression and public speaking skills. 8. Literary analysis of poetry and prose texts. 9. Introduction to key figures in classical and modern Arabic literature. 10. Practical activities: discussions – oral presentations – written exercises.

Learning and Teaching Strategies	
Strategies	1. Interactive lectures to explain linguistic and literary concepts. 2. Group work through class discussions and collaborative activities. 3. Written exercises to develop writing and grammar skills. 4. Oral presentations to enhance speaking abilities and self-confidence. 5. Analytical reading of various texts to understand deeper meanings.

	6. Project-based learning to apply knowledge in real-world contexts. 7. Brainstorming for idea generation and creative expression. 8. Self-assessment and feedback for performance improvement and continuous learning. 9. Field visits or meetings with writers to connect content with real life (if applicable). 10. Use of multimedia tools such as educational videos and presentations to enrich the content.

Student Workload (SWL)

Structured SWL (h/sem)	30	**Structured SWL (h/w)**	2
Unstructured SWL (h/sem)	17	**Unstructured SWL (h/w)**	1
Total SWL (h/sem)	**50**		

Module Evaluation

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	**Quizzes**	1	10% (10)	15	LO #1 - #14
	Onset assignments	1	10% (10)	14	LO #8 - #13
	Online assignments	1	10% (10)	6	LO #1 - #5
	Reports	1	10% (10)	5	LO #1 - #4
Summative assessment	**Midterm Exam**	2hr	10% (10)	8	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

	Material Covered
Week 1	Getting acquainted with the history of the Arabic language, and its sections: first: grammar: explaining the payments from the Beginner, the news, the name of Kan and her sisters, and the participation of students in applying it
Week 2	Complete the explanation of the payments from the news of Kan, her sisters and the actor The actor's deputy will activate the practical application
Week 3	Explanation of the postulates of the effect and absolute effect

Week 4	Complete the explanation of the positions of effect and effect for him and for him
Week 5	The use of competition and the spirit of the group in explaining the subject of the case and raising some questions about the subject of the exception
Week 6	Using the question-and-answer method by presenting the topic of discrimination and continuing to present the subject of the caller
Week 7	Getting into the topic of prepositions: explaining the importance of prepositions from the genitive by preposition and genitive by annexation
Week 8	Explanation of the topic of minions, from participle, emphasis and substitution
Week 9	Complete the explanation of the Minions of the kindness of the pattern
Week 10	Entering a new topic, namely the number, and knowing its provisions
Week 11	Second: to identify the exchange science and the exchange balance by applying it in practice
Week 12	Explain the subject of the correct verb and the difference between it and the verb The sufferer
Week 13	Touch on the subject of abstract verbs and more, explain the subject of verb attribution
Week 14	Third: spelling: explain the topic of punctuation marks and find out their importance in writing research and University theses
Week 15	Recognize the importance of drawing the Hamza, writing the TA and applying

Learning and Teaching Resources

	Text	**Available in the Library?**
Required Texts	Arabic language book, Dr. Rafid Sabah Altimimy	Yes
Recommended Texts	Journals and reports, online references, internet.	No

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

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	**Computer-1**			**Module Delivery**	
Module Type				☒ **Theory** ☒ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**WOU4**				
ECTS Credits	**3**				
SWL (hr/sem)	**75**				
Module Level	1		**Semester of Delivery**	1	
Administering Department	Type Dept. Code		**College**	Type College Code	
Module Leader	Zahraa Lafta		**e-mail**		
Module Leader's Acad. Title	ASSIST. PROF.		**Module Leader's Qualification**	MSC	
Module Tutor			**e-mail**		
Peer Reviewer Name	HASAN HADI FARAJ		**e-mail**		
Scientific Committee Approval Date	3/3/2026		**Version Number**	1.0	

Relation with other Modules			
Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents	
Identify computer components and their functions, and identify the computer technologies, programs, and applications required to operate and complete the task.	**Module Objectives**
Give theoretical lectures to convey information to students using the following methods: (whiteboard, data projector, interactive lecture, educational video presentation).	**Module Learning Outcomes**
Conduct practical lectures through observation and interaction with field or laboratory aspects.	**Indicative Contents**

Learning and Teaching Strategies

Providing theoretical lectures to deliver information to students through the following methods: (blackboard, data projector, interactive lecture, educational video presentation). Conducting practical lectures through observation and interaction with field or laboratory aspects.	**Strategies**

Student Workload (SWL)

Structured SWL (h/sem)	45	**Structured SWL (h/w)**	15
Unstructured SWL (h/sem)	5	**Unstructured SWL (h/w)**	10
Total SWL (h/sem)	**75**		

Module Evaluation

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Tests	1	10% (10)	Continuous	1,2,3,4,5,6
	College assignments	15	10% (10)	Continuous	1,2,3,4,5,6
	Homework	1	15% (15)	Continuous	1,2,3,4,5,6،7,8,9,10,11, 12,13,14,
	Reports	1	5% (5)	Continuous	1,2,3,4,5,6
Summative assessment	Midterm exam	2hr	10% (10)	14	1,2,3,4,5,6
	Final exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Lab. Syllabus)

Material Covered	
What is a Computer? / Computer Features / Computer Components / Computer Types	**Week 1**
Main Parts of a Personal Computer	**Week 2**

Operating Systems and Their Types	**Week 3**
Network Configuration	**Week 4**
Communication Networks and Global Connectivity	**Week 5**
The Internet	**Week 6**
Daily Life and Computers	**Week 7**
Insurance, Copyright, and Law	**Week 8**
Dealing with Menus and Icons	**Week 9**
Desktop Quick Menu	**Week 10**
Windows Explorer	**Week 11**
Using Additional Programs with Windows	**Week 12**
How to Improve the Appearance of Screen Fonts When Using Flat Panel LCD Monitors or Laptops	**Week 13**
What is the Firewall in Windows XP and How Do I Activate It?	**Week 13**
Dynamic Disk	**Week 14**

Learning and Teaching Resources

	Text	**Available in the Library?**
Required Texts	Computer Science Principles Book, Software User Guide	Yes
Recommended Texts	Scientific Articles	No
Websites	No	

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

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	**Principles of Field Crops**			**Module Delivery**	
Module Type	**B**			☐**Theory** ☒ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	AGR122				
ECTS Credits	5				
SWL (hr/sem)	**125**				
Module Level	1		**Semester of Delivery**	2	
Administering Department	Plant protection		**College**	AGRI	
Module Leader	Dr. Ali Hashem Abdul Razzaq + Hadeel Hamza		**e-mail**	alhashim@uowasit.edu.iq	
Module Leader's Acad. Title	Lecturer		**Module Leader's Qualification**	PhD	
Module Tutor	Name		**e-mail**	E-mail	
Peer Reviewer Name			**e-mail**	E-mail	
Scientific Committee Approval Date	3/03/2026		**Version Number**	1.0	

Relation with other Modules			
Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents	
1. The most important elements of agricultural production, as they provide essential needs for the continuity of life.	**Module Objectives**
1. Identify the most important field crops. 2. Study the types of crops and the environments suitable for their growth. 3. Gain knowledge of the types of field crops and how to propagate them.	**Module Learning Outcomes**
	Indicative Contents

Learning and Teaching Strategies	
1. Interactive lectures to explain linguistic and literary concepts. 2. Group work through class discussions and collaborative activities. Using multimedia, such as educational videos and presentations, to explain the content.	

Student Workload (SWL)			
Structured SWL (h/sem)	30	**Structured SWL (h/w)**	2
Unstructured SWL (h/sem)	17	**Unstructured SWL (h/w)**	1
Total SWL (h/sem)	**50**		

Module Evaluation					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	Tests	1	10% (10)	15	LO #1 - #14
	College assignments	1	10% (10)	14	LO # 8- #13
	Homework	1	10% (10)	6	LO #1 - #5
	Reports	1	10% (10)	5	LO #1 - #4
Summative assessment	Midterm exam	2hr	10% (10)	8	LO #1 - #7
	Final exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
Subject	**week**
The student will learn about field crops.	1
The student will learn about the classification of field crops according to their economic use.	2
The student will learn about the botanical description of field crops, such as grasses and	3

legumes.	
The student will learn about environmental factors and their relationship to field crop growth.	4
The student will learn about weather factors, light, temperature, and humidity.	5
The student will learn about crop types based on their tolerance to salinity.	6
The student will learn about the relationship between water and field crop growth.	7
The student will learn about biotic factors involving microorganisms.	8
The student will learn about land preparation processes for planting.	9
The student will learn about the conditions required for field crop seeds.	10
The student will learn about weeds, their spread factors, and the losses they cause.	11
The student will learn about the types of agricultural rotations.	12
The student will learn about field crop breeding methods.	13
The student will learn about the stages of improved seed production and propagation.	14
The student will learn about the most important annual crops in Iraq.	15

Delivery Plan (Weekly Lab. Syllabus)	
Subject	**week**
The student will learn about field crops.	1
The student will learn about the classification of field crops according to their economic use.	2
The student will learn about the botanical description of field crops, such as grasses and legumes.	3
The student will learn about environmental factors and their relationship to field crop growth.	4
The student will learn about weather factors, light, temperature, and humidity.	5
The student will learn about crop types based on their tolerance to salinity.	6
The student will learn about the relationship between water and field crop growth.	7

The student will learn about biotic factors involving microorganisms.	8
The student will learn about land preparation processes for planting.	9
The student will learn about the conditions required for field crop seeds.	10
The student will learn about weeds, their spread factors, and the losses they cause.	11
The student will learn about the types of agricultural rotations.	12
The student will learn about field crop breeding methods.	13
The student will learn about the stages of improved seed production and propagation.	14
The student will learn about the most important annual crops in Iraq.	15

Learning and Teaching Resources

	Text	Available in the Library?
Required Texts	Field Crops Book	Yes
Recommended Texts	(scientific journals, reports), electronic references, websites.	No

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

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	**Principles of Soil Science**			**Module Delivery**	
Module Type	**B**			☐**Theory** ☒ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	AGR112				
ECTS Credits	7				
SWL (hr/sem)	**175**				
Module Level	1		**Semester of Delivery**	2	
Administering Department	Plant protection		**College**	Agric.	
Module Leader	Dr. Muntazer Hammadi + Essam Hani		**e-mail**	Malbudeiri@uowasit.edu.iq	
Module Leader's Acad. Title	Assist. Prof.		**Module Leader's Qualification**	PhD	
Module Tutor	Name		**e-mail**	E-mail	
Peer Reviewer Name	Name		**e-mail**	E-mail	
Scientific Committee Approval Date	14/10/2025		**Version Number**	1.0	

Relation with other Modules			
Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents	
1. Soil science studies the origin and development of soil. 2 .Includes the physical and chemical properties of soil. 2. Soil classification and management in Iraq.	**Module Objectives**
1. Identify the most important soils and their distribution. 2. Study soil types and measure their suitability for agricultural crops. 3 .Gain knowledge of soil types in central and southern Iraq.	**Module Learning Outcomes**
	Indicative Contents

Learning and Teaching Strategies	
1. Interactive lectures to explain linguistic and literary concepts. 2. Group work through class discussions and collaborative activities. 3. Use of multimedia, such as educational videos and presentations, to explain content.	

Student Workload (SWL)			
Structured SWL (h/sem)	30	**Structured SWL (h/w)**	2
Unstructured SWL (h/sem)	17	**Unstructured SWL (h/w)**	1
Total SWL (h/sem)	**50**		

Module Evaluation					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	Tests	1	10% (10)	15	LO #1 - #14
	College assignments	1	10% (10)	14	LO # 8- #13
	Homework	1	10% (10)	6	LO #1 - #5
	Reports	1	10% (10)	5	LO #1 - #4
Summative assessment	Midterm exam	2hr	10% (10)	8	LO #1 - #7
	Final exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
Subject	**Week**
The student will be introduced to the definition and general concepts of soil, soil science, and the origin and development of soils.	1

The student will be introduced to the physical properties of soil.	2
The student will be introduced to soil water.	3
The student will be introduced to colloids and the chemical properties of soils.	4
The student will be introduced to soil salinity and alkalinity, the reclamation of salt-affected lands, and the management of reclaimed soils.	5
The student will be introduced to the biological and biochemical properties of soils.	6
The student will be introduced to soil fertility and plant nutrition.	7
The student will be introduced to the classification and management of soils in Iraq.	8
The student will be introduced to soil colloids.	9
The student will be introduced to soil formation processes.	10
The student will be introduced to soil salinity and alkalinity.	11
The student will be introduced to the nature of ion exchange.	12
The student will be introduced to the determination of soil salinity.	13
The student will be introduced to the classification of soil water.	14
The student will be introduced to the nature of ion exchange.	15

Delivery Plan (Weekly Lab. Syllabus)

Subject	Week
Soil Definition and Sampling Methods	1
Interpreting Soil Moisture Content	2
Estimating Total Soil Soil Soil Soil Soil pH	3
Estimating Percentage of Soil Separates (Determining Soil Texture)	4
First Month	5
Estimating Bulk Density	6

Soil Definition and Sampling Methods	7
True density and porosity of soil	8
The student will learn about soil colloids	9
Estimating calcium carbonate in soil	10
Estimating soluble calcium and magnesium in soil	11
Estimating carbonates and bicarbonates	12
The student will learn about determining soil salinity	13
Estimating organic matter in soil	14
Estimating chlorides	15

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts	Principles of Soil Science, Ministry of Higher Education and Scientific Research	Yes
Recommended Texts	(scientific journals, reports), electronic references, websites.	No

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

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	**General chemistry**			**Module Delivery**	
Module Type	**B**			☐**Theory** ☒ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	AGR111				
ECTS Credits	8				
SWL (hr/sem)	**200**				
Module Level	1		**Semester of Delivery**	2	
Administering Department	Plant protection		**College**	Agri.	
Module Leader	Dr. Wissam Thamer Jabbar + Alia Abdul Hussein		**e-mail**	walmayah@uowasit.edu.iq	
Module Leader's Acad. Title	Assist. Prof.		**Module Leader's Qualification**	Phd	
Module Tutor	Name		**e-mail**	E-mail	
Peer Reviewer Name	Name		**e-mail**	E-mail	
Scientific Committee Approval Date	14/10/2025		**Version Number**	1.0	

Relation with other Modules			
Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents	
i. Introduce the student to the importance of water and its chemical and physical properties. ii. Distinguish between solutions and methods of preparing them. iii. Introduce the student to general chemistry laboratories.	**Module Objectives**
1. Enabling students to recognize elements and their groups 2. Methods for separating elements from their groups	**Module Learning Outcomes**
	Indicative Contents

Learning and Teaching Strategies

a. Interactive lectures to explain linguistic and literary concepts. b. Group work through class discussions and collaborative activities. Using multimedia, such as educational videos and presentations, to explain content.	

Student Workload (SWL)

Structured SWL (h/sem)	30	**Structured SWL (h/w)**	2
Unstructured SWL (h/sem)	17	**Unstructured SWL (h/w)**	1
Total SWL (h/sem)	**50**		

Module Evaluation

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Tests	1	10% (10)	15	LO #1 - #14
	College assignments	1	10% (10)	14	LO # 8- #13
	Homework	1	10% (10)	6	LO #1 - #5
	Reports	1	10% (10)	5	LO #1 - #4
Summative assessment	Midterm exam	2hr	10% (10)	8	LO #1 - #7
	Final exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
Subject	**Week**
The student will learn about covalent bond fission in chemistry.	1
The student will learn about alkenes and rotary motion.	2
The student will learn about alkenes and double bond formation.	3
The student will learn about hydrocarbon compounds.	4
The student will learn about alkenes.	5
The student will learn about the formation of hydrocarbon compounds.	6
The student will learn about aliphatic cyclic compounds.	7
The student will learn about aromatic ring formation.	8
The student will learn about aliphatic and aromatic halides.	9
The student will learn about nucleophilic substitution in halides.	10
The student will learn about alcohols and phenols.	11
The student will learn about aldehydes and ketones.	12
The student will learn about nitrogen derivatives of aldehydes and ketones.	13
The student will learn about amines.	14
The student will learn about carboxylic acids.	15

Delivery Plan (Weekly Lab. Syllabus)	
Subject	**Week**
Methods for separating the first set	1
Methods for separating the first set	2
Practical application of the unknown of the first set	3

Separating the second set	4
Practical application of the unknown of the second set	5
Practical application of the unknown of the second set	6
Practical application of the unknown of the second set	7
Practical application of the unknown of the second set	8
Separating the elements of the third set	9
Separating the elements of the unknown of the third set	10
Practical application of the unknown of the year	11
Chapter 4: Elements of Group 4	12
Chapter 5: Elements of Group 5	13
Chapter 6: Elements of Group 6	14
Chapter 4: Elements of Group 4	15

Learning and Teaching Resources

	Text	Available in the Library?
Required Texts	Principles of General Chemistry, Ministry of Higher Education and Scientific Research	Yes
Recommended Texts	(scientific journals, reports), electronic references, websites.	No

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	**FX –** Fail		(45-49)	More work required but credit awarded
(0 – 49)	**F –** Fail		(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	**Principles of Horticulture**			**Module Delivery**	
Module Type	**B**			☐**Theory** ☒ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	AGR112				
ECTS Credits	3				
SWL (hr/sem)	**75**				
Module Level	1		**Semester of Delivery**	2	
Administering Department	Plant protection		**College**	Agri.	
Module Leader	Dr. Ahmed Shaker Mohsen + Ali Bashar		**e-mail**	ahshaker@uowasit.edu.iq	
Module Leader's Acad. Title	Assist. Prof.		**Module Leader's Qualification**	PhD	
Module Tutor	Name		**e-mail**	E-mail	
Peer Reviewer Name	Name		**e-mail**	E-mail	
Scientific Committee Approval Date	3/03/2026		**Version Number**	1.0	

Relation with other Modules			
Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents	
i. Horticulture, history of the development of histology, economic and nutritional importance ii. Classification of horticultural plants	**Module Objectives**
The student will learn about horticulture and the development of histology.	**Module Learning Outcomes**
	Indicative Contents

Learning and Teaching Strategies	
a. Interactive lectures to explain linguistic and literary concepts. b. Group work through class discussions and collaborative activities. Using multimedia, such as educational videos and presentations, to explain content.	

Student Workload (SWL)			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	30	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**50**		

Module Evaluation

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Tests	1	10% (10)	15	LO #1 - #14
	College assignments	1	10% (10)	14	LO # 8- #13
	Homework	1	10% (10)	6	LO #1 - #5
	Reports	1	10% (10)	5	LO #1 - #4
Summative assessment	Midterm exam	2hr	10% (10)	8	LO #1 - #7
	Final exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

Subject	Week
The student will learn about horticulture and the history of the development of histology.	1
The student will learn about the classification of horticultural plants.	2
The student will learn about environmental factors and their impact on horticultural crop production.	3
The student will learn about methods of horticultural plant reproduction (sexual and vegetative reproduction).	4
The student will learn about nurseries, field cultivation patterns, and ornamental and medicinal plants.	5
The student will learn about agricultural processes.	6
The student will learn about cultivation under conditioned environments.	7
The student will learn about harvesting, picking, and marketing.	8
The student will learn about storage and preservation.	9
The student will learn about an overview of horticultural plant breeding and improvement.	10
The student will learn about examples of deciduous and perennial fruit trees.	11
The student will learn about examples of vegetable plants and strategic crops.	12
The student will learn about examples of ornamental plants and landscape architecture.	13
The student will learn about examples of medicinal and aromatic plants.	14
Introduction to horticultural fields and facilities (gardens, orchards, and fields).	15

Delivery Plan (Weekly Lab. Syllabus)	
Subject	**Week**
The student will be introduced to horticulture, the history of the development of histology	1
classification of horticultural plants,	2

methods of propagation of horticultural plants, nurseries, field cultivation patterns	3
ornamental and medicinal plants, and agricultural processes,	4
will be introduced to cultivation under conditioned environments. The student will be introduced to harvesting, picking, and marketing,	5
storage and preservation,	6
the breeding and improvement of horticultural plants,	7
including deciduous	8
medicinal and aromatic plants,	9
introduction to horticultural fields and facilities	10
Gardens, orchards, and fields.	11
environmental factors and their impact on horticultural crop production	12
perennial fruit trees, vegetable plants,	13
strategic crops, ornamental plants	14
landscape design,	15

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts		Yes
Recommended Texts	Scientific journals, reports, electronic references, websites.	No

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	**FX –** Fail		(45-49)	More work required but credit awarded
(0 – 49)	**F –** Fail		(0-44)	Considerable amount of work required

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MODULE DESCRIPTION FORM

Module Information					
Module Title	**Principles of Agricultural Economics**			**Module Delivery**	
Module Type	**B**			☐**Theory** ☒ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	AGR121				
ECTS Credits	3				
SWL (hr/sem)	75				
Module Level	1		**Semester of Delivery**	2	
Administering Department	Plant protection		**College**	Agri.	
Module Leader	Sarah Ali Hussein		**e-mail**	sahussain@uowasit.edu.iq	
Module Leader's Acad. Title	Assist. Lect.		**Module Leader's Qualification**	MSC	
Module Tutor	Name		**e-mail**	E-mail	
Peer Reviewer Name	Name		**e-mail**	E-mail	
Scientific Committee Approval Date	3/03/2026		**Version Number**	1.0	

Relation with other Modules			
Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents	
i. Study the concept of economics, agricultural economics, branches of agricultural economics, and the relationship of agricultural economics to other sciences. ii. Study the economic and agricultural problem in terms of its causes and solutions. Study the economics of agricultural production.	**Module Objectives**
The student should become familiar with general concepts/aspects of economic life/the economic problem.	**Module Learning Outcomes**
	Indicative Contents

Learning and Teaching Strategies	
- Teamwork through class discussions and collaborative activities. Using multimedia, such as educational videos and presentations, to explain the content.	

Student Workload (SWL)			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	30	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**50**		

Module Evaluation					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	Tests	1	10% (10)	15	LO #1 - #14
	College assignments	1	10% (10)	14	LO # 8- #13
	Homework	1	10% (10)	6	LO #1 - #5
	Reports	1	10% (10)	5	LO #1 - #4
Summative assessment	Midterm exam	2hr	10% (10)	8	LO #1 - #7
	Final exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
Subject	**Week**
The student will be introduced to general concepts / aspects of economic life / economic problems	1
The student will be introduced to the theory of consumer behavior.	2
The student will be introduced to the modern theory of consumer equilibrium.	3
The student will be introduced to supply and demand (individual), the demand table and curve.	4
The student will be introduced to the elasticity of demand and the influencing factors.	5
The student will be introduced to supply, the supply table and curve.	6
The student will be introduced to the elasticity of supply and the influencing factors.	7
The student will be introduced to demand, supply, and price determination.	8
The student will be introduced to agricultural production and the elements of production.	9
The student will be introduced to the law of diminishing returns and its stages.	10
The student will be introduced to general economics and agricultural economics.	11
The student will be introduced to the role of agricultural activity in the national economy.	12
The student will be introduced to the branches of agricultural economics, including the economics of agricultural production.	13
The student will be introduced to agricultural prices, agricultural marketing, agricultural financing and lending.	14
The student will be introduced to agricultural business management, agricultural cooperation, agricultural policy, and development.	15

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts		Yes

Recommended Texts	Scientific journals, reports, electronic references, websites.	No

Grading Scheme مخطط الدرجات				
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

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MODULE DESCRIPTION FORM

Module Information					
Module Title	**Principles of plant protection**			**Module Delivery**	
Module Type	C			☐ **Theory** ☒ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	PP112				
ECTS Credits	8				
SWL (hr/sem)	200				
Module Level		1	**Semester of Delivery**		2
Administering Department		Plant protection	**College**	Agri.	
Module Leader	Dr. Hasan Hadi Faraj + Dr. Sabreen Hadi Hanash		**e-mail**	hasanfaraj@uowasit.edu.iq	
Module Leader's Acad. Title		Assist. Prof.	**Module Leader's Qualification**		PhD
Module Tutor	Name		**e-mail**	E-mail	
Peer Reviewer Name		Name	**e-mail**	E-mail	
Scientific Committee Approval Date		14/10/2025	**Version Number**		1.0

Relation with other Modules			
Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents	
1. Preparing students capable of working in the field of crop protection according to modern scientific curricula. 2. Entering the agricultural sector with outstanding competence through participation in projects.	**Module Objectives**
the agricultural sector with outstanding competence through participation in projects	**Module Learning Outcomes**
	Indicative Contents

Learning and Teaching Strategies	
- Teamwork through class discussions and collaborative activities. -Use of multimedia, such as educational videos and presentations, to explain content.	

Student Workload (SWL)			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	30	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**50**		

Module Evaluation					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	Tests	1	10% (10)	15	LO #1 - #14
	College assignments	1	10% (10)	14	LO # 8- #13
	Homework	1	10% (10)	6	LO #1 - #5
	Reports	1	10% (10)	5	LO #1 - #4
Summative assessment	Midterm exam	2hr	10% (10)	8	LO #1 - #7
	Final exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

Subject	Week
Some definitions and terms in plant diseases	1
Living standards of organisms	2
Disease development stages	3
Diagnosis of the pathogen	4
Host response to infection	5
Effects of pathogens on their hosts	6
Organisms that cause plant diseases	7
Methods of plant resistance to pathogens	8
Viruses	9
Nematodes	10
Means of pathogen spread	11
Control of plant diseases	12
Agricultural pests	13
Economic importance of insects	14
Insect metamorphosis	15

Delivery Plan (Weekly Lab. Syllabus)	
Subject	**Week**
Introduction to Pests	1
Identify the most important insect pests	2
Observe some insect infestations	3
Observe examples of harmful insects	4
First Exam	5

The economic importance of plant diseases:	6
The most common plant diseases in Iraq:	7
Parasitic plants:	8
Some definitions and terms in plant diseases	9
Parasitism of living organisms	10
Stages of disease development	11
Disease diagnosis	12
Host response to infection	13
Effect of pathogen on their hosts	14
Second Month Exam	15

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts	General Entomology	Yes
Recommended Texts	Plant Pathology	No

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

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	**Entomology**			**Module Delivery**	
Module Type	**C**			☐**Theory** ☒ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	PP211				
ECTS Credits	7				
SWL (hr/sem)	**175**				
Module Level		1	**Semester of Delivery**		2
Administering Department		Plant protection	**College**	Agri.	
Module Leader	Dr. Hassan Hadi Faraj + Dr. Sabreen Hadi Hanash+ Farah Nather		**e-mail**	hasanfaraj@uowasit.edu.iq	
Module Leader's Acad. Title		Assist. Prof.	**Module Leader's Qualification**		PhD
Module Tutor	Name		**e-mail**	E-mail	
Peer Reviewer Name		Name	**e-mail**	E-mail	
Scientific Committee Approval Date		3/03/2026	**Version Number**		1.0

Relation with other Modules			
Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents	
- Learn about insect stages and how they develop. - Learn about the most important harmful insects.	**Module Objectives**
	Module Learning Outcomes
	Indicative Contents

Learning and Teaching Strategies	
- Teamwork through class discussions and collaborative activities. - Using multimedia, such as educational videos and presentations, to explain content.	

Student Workload (SWL)			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	30	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**50**		

Module Evaluation					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	Tests	1	10% (10)	15	LO #1 - #14
	College assignments	1	10% (10)	14	LO # 8- #13
	Homework	1	10% (10)	6	LO #1 - #5
	Reports	1	10% (10)	5	LO #1 - #4
Summative assessment	Midterm exam	2hr	10% (10)	8	LO #1 - #7
	Final exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
Subject	**Week**
Definition of Insects	1
Taxonomic Position of Insects	2
External Appearance	3
Stomach Wall Projections	4
First Month Exam	5
Body Regions	6
Mouth Parts	7
Thorax and Neck	8
Wings and Their Types	9
Second Month Exam	10
Wing Grip System	11
Abdomen and Its Appendages	12
Internal Anatomy	13
Respiratory System	14
Nervous System and Sense Organs	15

Delivery Plan (Weekly Lab. Syllabus)	
Subject	**Week**
Insect Collection Tools	1
Field Tour	2
Learn about the Phylum Arthropoda	3
External Appearance of Insects	4

Antennas	5
Mouthparts of Insects	6
First Month Exam	7
Mouthparts	8
Thorax and Wings	9
Abdomen and Appendages	10
Second Month Exam	11
Internal Anatomy	12
Respiratory System	13
Nervous System	14
Sense Organs	15

Learning and Teaching Resources

	Text	Available in the Library?
Required Texts	General Entomology	Yes
Recommended Texts	General Entomology (journals, reports), electronic references, websites.	No

Grading Scheme

مخطط الدرجات

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

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	**Non-insect animal pests**			**Module Delivery**	
Module Type	**C**			☐**Theory** ☒ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	PP122				
ECTS Credits	7				
SWL (hr/sem)	**175**				
Module Level		1	**Semester of Delivery**		2
Administering Department		Plant Protection	**College**	Agri.	
Module Leader	Dr. Qais Muri Al-Abousi + Saja Intisar		**e-mail**	khmurri@uowasit.edu.iq	
Module Leader's Acad. Title		Assist. Lect.	**Module Leader's Qualification**		PhD
Module Tutor	Name		**e-mail**	E-mail	
Peer Reviewer Name		Name	**e-mail**	E-mail	
Scientific Committee Approval Date		3/03/2026	**Version Number**		1.0

Relation with other Modules			
Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents	
-Methods of classifying non-insect animal pests -Ecology of non-insect animal pests	**Module Objectives**
-Methods of collecting and classifying non-insect animal pests in the soil - Traps and tools used in monitoring non-insect pests	**Module Learning Outcomes**
-Field lecture in the College of Agriculture fields to collect and classify non-insect pests and training on the use of some traps.	**Indicative Contents**

Learning and Teaching Strategies

- Teamwork through class discussions and collaborative activities. - Using multimedia, such as educational videos and presentations, to explain content.	

Student Workload (SWL)			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	30	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**50**		

Module Evaluation

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Tests	1	10% (10)	15	LO #1 - #14
	College assignments	1	10% (10)	14	LO # 8- #13
	Homework	1	10% (10)	6	LO #1 - #5
	Reports	1	10% (10)	5	LO #1 - #4
Summative assessment	Midterm exam	2hr	10% (10)	8	LO #1 - #7
	Final exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

Subject	Week
Ecology of non-insect animal pests - Methods of classifying non-insect animal pests - Biological impact of soil animals	1
Plant-parasitic animals - Factors affecting pest reproduction and growth - Animals of the agricultur environment	2
Plant nematodes and their position in the animal kingdom and their classification - General characteristics of nematodes - Economic importance and harm - Structural and anatomical features of nematodes, body wall, digestive system	3
Excretory system in nematodes, nervous system, reproductive system, biological activities of nematodes	4
Phylum: Arthropoda and its most important distinguishing characteristics - Classes of arthropods a characteristics of each class	5
Agricultural economic mites (economic importance - damage they cause to plants - damage to humans and animals)	6
First month exam	7
Ticks and their hosts - External appearance of ticks - Body regions - Different body systems	8
Phylum: Mollusca (mollusks) - General characteristics of the class - Identification of snails - Economic importance Snails - The most important genera of the order Nawa	9
Rodents and their life history - General characteristics - Nature and habits - Economic importance of rodents	10
cators of rodent presence - Some important and common species in Iraq	11
Order: Chiroptera and its most important families - Flight adaptations - Nutrition - Mating behavior - Economic importance	12
Birds (General characteristics of birds - Nature of birds - General classification of birds - External characteristics - Foot shapes)	13
Second month exam	14
Comprehensive review	15

Delivery Plan (Weekly Lab. Syllabus)

Subject	Week
(Methods of collecting and classifying non-insect animal pests in soil - Traps and tools used to monitor non-insect pests)	1
A field lecture in the College of Agriculture fields to collect and classify non-insect pests and training on the use of some traps.	2
Methods of monitoring and controlling pests in agricultural fields - The most important factors affecting the reproduction and growth of agricultural pests.	3
A field tour of the College of Agriculture fields to monitor for signs of infestation, including taking samples of infected plants and analyzing them in the field.	4
Excretory system - Nervous system - Reproductive system	5
First month exam	6
Tick classification and types - External appearance and body regions	7
General characteristics of the Phylum: Mollusca - The most important genera of the Mollusca – Snails	8
Types of rodents - Their general characteristics - Their various harmful effects - Methods of control	9
Factors indicating the presence of rodents - Important and common rodent species in Iraq	10
Bats and their most important hosts - Their flight method - Economic importance	11
Second month exam	12
General characteristics of birds - External characteristics - Foot shapes	13
The most important harmful hosts	14
General and comprehensive review	15

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts	General Entomology	Yes

Recommended Texts	General Entomology (journals, reports), electronic references, websites.	No

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

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	**Principles of Statistics**			**Module Delivery**	
Module Type	**C**			☐**Theory** ☒ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	AGR221				
ECTS Credits	7				
SWL (hr/sem)	**175**				
Module Level		1	**Semester of Delivery**		2
Administering Department		Plant Protection	**College**		Agri.
Module Leader	Dr. Hassan Hadi Faraj + Sarah Ali Hussein+ Raad Nomaim + Tahsain Abd AlHasan		**e-mail**		hasanfaraj@uowasit.edu.iq
Module Leader's Acad. Title		Assist. Lect.	**Module Leader's Qualification**		PhD
Module Tutor	Name		**e-mail**		E-mail
Peer Reviewer Name		Name	**e-mail**		E-mail
Scientific Committee Approval Date		14/10/2025	**Version Number**		1.0

Relation with other Modules			
Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents	
- Introduction to the principles of statistics and methods of collecting statistical samples	**Module Objectives**
	Module Learning Outcomes
- Familiarization with the most important statistical measures used	**Indicative Contents**

Learning and Teaching Strategies	
- Teamwork through class discussions and collaborative activities. - Using multimedia, such as educational videos and presentations, to explain content.	

Student Workload (SWL)			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	30	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**50**		

Module Evaluation					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	Tests	1	10% (10)	15	LO #1 - #14
	College assignments	1	10% (10)	14	LO # 8- #13
	Homework	1	10% (10)	6	LO #1 - #5
	Reports	1	10% (10)	5	LO #1 - #4
Summative assessment	Midterm exam	2hr	10% (10)	8	LO #1 - #7
	Final exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
Subject	**Week**
The student will learn the nature of statistics.	1
	2
The student will learn about tabular and graphical representations.	3
The student will learn about frequency distribution tables.	4
The student will learn about proportional distribution tables.	5
The student will learn about cumulative distributions.	6
The student will learn about measures of central tendency and median.	7
The student will learn about measures of dispersion and variance.	8
The student will learn the principles of probability theory.	9
The student will learn about probability distributions.	10
student will learn about binomial distributions.	11
The student will learn about polynomial probability distributions.	12
The student will learn about the normal distribution.	13
The student will learn about hypothesis testing.	14
The student will learn about the chi-square test.	15

Delivery Plan (Weekly Lab. Syllabus)	
Subject	**Week**
The student will learn about the nature of statistics.	1
distribution tables	2
Exercises on tabular presentation and graphing	3
Exercises on frequency distribution tables	4

Exercises on proportional distribution tables	5
Exercises on cumulative distributions	6
Exercises on measures of central tendency and median	7
Exercises on measures of dispersion and variance	8
Exercises on the principles of probability theory	9
Exercises on probability distributions	10
Exercises on binomial distributions	11
Exercises on polynomial probability distributions	12
Exercises on the normal distribution	13
Exercises on hypothesis testing	14
Exercises on chi-square tests	15

Learning and Teaching Resources

	Text	Available in the Library?
Required Texts	Statistics book	Yes
Recommended Texts	(journals, reports), electronic references, websites.	No

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	**FX –** Fail		(45-49)	More work required but credit awarded

(0 – 49)	**F –** Fail		(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	**Analytical Chemistry**			**Module Delivery**	
Module Type	**C**			☐**Theory** ☒ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	AGR211				
ECTS Credits	7				
SWL (hr/sem)	**175**				
Module Level	1		**Semester of Delivery**	2	
Administering Department	Plant Protection		**College**	Agri.	
Module Leader	Dr. Abbas Wsheil + Hamed Wafiq		**e-mail**	aalhamdani@uowasit.edu.iq	
Module Leader's Acad. Title	Assist. Lect.		**Module Leader's Qualification**	PhD	
Module Tutor	Name		**e-mail**	E-mail	
Peer Reviewer Name	Name		**e-mail**	E-mail	
Scientific Committee Approval Date	3/03/2026		**Version Number**	1.0	

Relation with other Modules			
Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents	
The Importance of Analytical Chemistry and its Applications	**Module Objectives**
- Identifying the most important applications of analytical chemistry	**Module Learning Outcomes**
- Performing some chemical analyses	**Indicative Contents**

Learning and Teaching Strategies	
- Teamwork through class discussions and collaborative activities. - Using multimedia, such as educational videos and presentations, to explain content.	

Student Workload (SWL)			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	30	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**50**		

Module Evaluation					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	Tests	1	10% (10)	15	LO #1 - #14
	College assignments	1	10% (10)	14	LO # 8- #13
	Homework	1	10% (10)	6	LO #1 - #5
	Reports	1	10% (10)	5	LO #1 - #4
Summative assessment	Midterm exam	2hr	10% (10)	8	LO #1 - #7
	Final exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
Subject	**Week**
Introduction	1
The Cell	2
The student will learn about carbohydrates - their definition and classes	3
The student will learn about monosaccharides	4
The student will learn about low-molecular-weight polysaccharides	5
The student will learn about polysaccharides	6
The student will learn about amino acids - their classes and reactions	7
The student will learn about proteins - their structure	8
The student will learn about proteins - their structure and classes	9
The student will learn about fatty acids - their classes	10
student will learn about fatty acids - their reactions	11
The student will learn about simple lipids - their structure and classes	12
The student will learn about complex and derived lipids - their structure and classes	13
The student will learn about nucleic acids - their importance, structure, and classes	14
The student will learn about enzymes - their properties	15

Delivery Plan (Weekly Lab. Syllabus)	
Subject	**Week**
Introduction to Biochemistry	1
Understanding what carbohydrates are - their definition - their types	2
Explanation of monosaccharides	3
Lower polysaccharides	4

Polysaccharides	5
Recognizing amino acids - their reactions	6
Recognizing proteins - their structure	7
First Monthly Exam	8
Fatty acids - their types	9
Fatty acids - their reactions	10
Simple lipids - their structure	11
Complex and derived lipids - their structure	12
Nucleic acids - their structure	13
Enzymes - their properties	14
Second Monthly Exam	15

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts	Chemistry book	Yes
Recommended Texts	(journals, reports), electronic references, websites.	No

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	**FX –** Fail		(45-49)	More work required but credit awarded

(0 – 49)	**F –** Fail		(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	**Agricultural Extension**			**Module Delivery**	
Module Type	**C**			☐**Theory** ☒ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	AGR212				
ECTS Credits	7				
SWL (hr/sem)	**175**				
Module Level	1		**Semester of Delivery**	2	
Administering Department	Plant Protection		**College**	Agri.	
Module Leader	Dr. Ali Hashim		**e-mail**	hsultan@uowasit.edu.iq	
Module Leader's Acad. Title	Assist. Lect.		**Module Leader's Qualification**	PhD	
Module Tutor	Name		**e-mail**	E-mail	
Peer Reviewer Name	Name		**e-mail**	E-mail	
Scientific Committee Approval Date	14/10/2025		**Version Number**	1.0	

Relation with other Modules			
Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents	
Students' understanding of agricultural extension principles	**Module Objectives**
- Students' understanding of agricultural extension mechanisms	**Module Learning Outcomes**
- Students' understanding of agricultural extension mechanisms	**Indicative Contents**

Learning and Teaching Strategies

- Teamwork through class discussions and collaborative activities. - Using multimedia, such as educational videos and presentations, to explain content.	

Student Workload (SWL)			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	30	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**50**		

Module Evaluation

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Tests	1	10% (10)	15	LO #1 - #14
	College assignments	1	10% (10)	14	LO # 8- #13
	Homework	1	10% (10)	6	LO #1 - #5
	Reports	1	10% (10)	5	LO #1 - #4
Summative assessment	Midterm exam	2hr	10% (10)	8	LO #1 - #7
	Final exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

Subject	Week
The student will learn about agricultural extension	1
Definition and origins.	2
The student will learn about the philosophy of agricultural extension.	3
The student will learn about the objectives of agricultural extension.	4
The student will learn about the principles of agricultural extension.	5
The student will learn about communication in agricultural extension.	6
The student will learn about the elements of the agricultural extension process.	7
The student will learn about field operations on the farm.	8
The student will learn about types of extension methods.	9
The student will learn about extension aids.	10
student will learn about adopting agricultural innovations.	11
The student will learn about rural leadership.	12
The student will learn about the rural reality.	13
The student will learn about planning extension programs.	14
The student will learn about implementing extension programs.	15

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts	books	Yes
Recommended Texts	(journals, reports), electronic references, websites.	No

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

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	**Human Rights**			**Module Delivery**	
Module Type	**C**			☐**Theory** ☒ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	WU02				
ECTS Credits	7				
SWL (hr/sem)	**175**				
Module Level	1		**Semester of Delivery**	2	
Administering Department	Plant Protection		**College**	Agri.	
Module Leader	Farid Jassim Hassan		**e-mail**	FaredalHadabi@uowasit.edu.iq	
Module Leader's Acad. Title	Assist. Lect.		**Module Leader's Qualification**	PhD	
Module Tutor	Name		**e-mail**	E-mail	
Peer Reviewer Name	Name		**e-mail**	E-mail	
Scientific Committee Approval Date	14/10/2025		**Version Number**	1.0	

Relation with other Modules			
Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents	
Identifying the crimes of the defunct Baath Party	**Module Objectives**
	Module Learning Outcomes
- Identifying the crimes of the defunct Baath Party	**Indicative Contents**

Learning and Teaching Strategies

- Teamwork through class discussions and collaborative activities. - Using multimedia, such as educational videos and presentations, to explain content.	

Student Workload (SWL)			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	30	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**50**		

Module Evaluation

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Tests	1	10% (10)	15	LO #1 - #14
	College assignments	1	10% (10)	14	LO # 8- #13
	Homework	1	10% (10)	6	LO #1 - #5
	Reports	1	10% (10)	5	LO #1 - #4
Summative assessment	Midterm exam	2hr	10% (10)	8	LO #1 - #7
	Final exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

Subject	Week
The student will learn the concept of crimes, their categories	1
the linguistic and technical definition of crime.	2
The student will learn the categories of crimes according to the law of the Supreme Criminal Court.	3
The student will learn the types of international crimes and the decisions issued by the Supreme Criminal Court.	4
The student will learn about psychological crimes and their mechanisms.	5
The student will learn about the effects of psychological crimes and their mechanisms.	6
The student will learn about the militarization of society and the Ba'athist regime's stance on religi	7
The student will learn about forms of human rights violations and crimes committed by the authorities.	8
The student will learn about the political and military decisions of the Ba'athist regime regarding violations and the locations of prisons and detention centers used by the Ba'athist regime.	9
The student will learn about democracy, criticism of democratic authorities, and elections.	10
student will learn about wartime and radioactive pollution and landmine explosions.	11
The student will learn about the destruction of cities and villages and the scorched-earth policy.	12
The student will learn about the draining of the marshes and the bulldozing of palm groves, trees, and crops.	13
The student will learn about the crimes of mass graves committed by the Ba'athist regime in Iraq.	14
The student will learn about the chronological classification of mass graves in Iraq.	15

Learning and Teaching Resources

	Text	Available in the Library?
Required Texts	Human rights book	Yes
Recommended	(journals, reports), electronic references, websites.	No

Texts		

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

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	**Medical and veterinary insects**			**Module Delivery**	
Module Type	**C**			☐**Theory** ☒ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	PP221				
ECTS Credits	7				
SWL (hr/sem)	**175**				
Module Level	1		**Semester of Delivery**	2	
Administering Department	Plant Protection		**College**	Agri.	
Module Leader	Dr. Qais Muri Al-Abousi + Saja Intisar		**e-mail**	khmurri@uowasit.edu.iq	
Module Leader's Acad. Title	Assist. Lect.		**Module Leader's Qualification**	PhD	
Module Tutor	Name		**e-mail**	E-mail	
Peer Reviewer Name	Name		**e-mail**	E-mail	
Scientific Committee Approval Date	14/10/2025		**Version Number**	1.0	

Relation with other Modules			
Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents	
Training students specializing in medical and veterinary entomology	**Module Objectives**
To combat disease vectors within agricultural colleges and the university in general.	**Module Learning Outcomes**
Utilizing scientific expertise in insect control through practical, health-related applications and integrating it into the community.	**Indicative Contents**

Learning and Teaching Strategies

- Teamwork through class discussions and collaborative activities. - Using multimedia, such as educational videos and presentations, to explain content.	

Student Workload (SWL)			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	30	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**50**		

Module Evaluation

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Tests	1	10% (10)	15	LO #1 - #14
	College assignments	1	10% (10)	14	LO # 8- #13
	Homework	1	10% (10)	6	LO #1 - #5
	Reports	1	10% (10)	5	LO #1 - #4
Summative assessment	Midterm exam	2hr	10% (10)	8	LO #1 - #7
	Final exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

Subject	Week
Medical Importance of Insects	1
Insects that Transmit Pathogens	2
Ectopic Parasites: Sucking Lice	3
Ectopic Parasites: Biting Lice	4
Medical and Veterinary Importance of Fleas	5
Medical Importance of Flies	6
Medical Importance of Blood-Sucking Flies	7
Internal Parasites: Myiasis and Myiasis	8
Veterinary Importance of Tick Parasites	9
Ticks as Vectors of Pathogens	10
dical Importance of Mite Parasites	11
Insects that Transmit Pathogens	12
Babesia	13
Theileria	14
Trypanosoma	15

Delivery Plan (Weekly Lab. Syllabus)	
Subject	**Week**
Important Medical Insects	1
Important Insects that Transmit Pathogens	2
Sucking Lice	3
Cutting Lice	4
Identifying the Most Important Fleas	5

Medical Importance of Flies	6
Blood-Sucking Flies	7
Myiasis and Myiasis	8
Tick Parasites	9
Ticks as Pathogen Vectors	10
Mite Parasites	11
Insects that Transmit Pathogens	12
Babesia	13
Theileria	14
Trypanosoma	15

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts	Medical insect book	Yes
Recommended Texts	(journals, reports), electronic references, websites.	No

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

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	**Principles of Microbiology**			**Module Delivery**	
Module Type	**C**			☐**Theory** ☒ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	PP213				
ECTS Credits	7				
SWL (hr/sem)	**175**				
Module Level		1	**Semester of Delivery**		2
Administering Department		Plant Protection	**College**	Agri.	
Module Leader	Dr. Jawadin Talib Abdul + Muhannad Muhsin+ Dr. Nadi Sadoom		**e-mail**	jalkooranee@uowasit.edu.iq	
Module Leader's Acad. Title		Assist. Lect.	**Module Leader's Qualification**		PhD
Module Tutor	Name		**e-mail**	E-mail	
Peer Reviewer Name		Name	**e-mail**	E-mail	
Scientific Committee Approval Date		3/03/2026	**Version Number**		1.0

Relation with other Modules			
Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents	
Introduction to microbiology and the theory of spontaneous generation, disease, and Koch's postulates.	**Module Objectives**
	Module Learning Outcomes
Preparing students specializing in microbiology and understanding the characteristics of microorganisms:	**Indicative Contents**

Learning and Teaching Strategies	
- Teamwork through class discussions and collaborative activities. - Using multimedia, such as educational videos and presentations, to explain content.	

Student Workload (SWL)			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	30	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**50**		

Module Evaluation					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	Tests	1	10% (10)	15	LO #1 - #14
	College assignments	1	10% (10)	14	LO # 8- #13
	Homework	1	10% (10)	6	LO #1 - #5
	Reports	1	10% (10)	5	LO #1 - #4
Summative assessment	Midterm exam	2hr	10% (10)	8	LO #1 - #7
	Final exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
Subject	**Week**
Introduction to Microbiology. A brief history of the development of microbiology,	1
The theory of spontaneous generation, disease, and Koch's postulates.	2
The place of microorganisms among living organisms. Characteristics of microorganisms – culture characteristics, morphology. Metabolic properties – chemical properties, genetic properties, taxonomic classification of microorganisms.	3
Bacterial structure and the functions of its parts. External structures – flagella, cilia, cell wall; interr structures – plasma membrane, ribosomes, genetic material.	4
Nutrition of microorganisms. Bacterial nutrition – bacterial culture media, growth factors, inorgani nutrients, nutrient transport across the plasma membrane.	5
Bacterial growth and reproduction. Isolation of bacteria in pure culture, preservation of bacterial cultures, cell cycle, growth phases,	6
Assessment of bacterial growth,	7
Mycoplasma, phytoplasma, rickettsia.	8
Continuous bacterial culture.	9
First monthly exam.	10
enzyme mechanism of action, enzyme inhibition, bacterial metabolism, energy production, energy utilization	11
Bacterial enzymes.	12
Endogenous enzymes, exogenous enzymes, physical and chemical properties of enzymes, .specialization, enzyme nomenclature, nature of enzymatic reactions	13
Microbial genetics: Nucleic acid synthesis, DNA replication, RNA transcription, protein synthesis, bacterial heterogeneity, genetic mutations, gene exchange (conjugation),	14
Genetic transformation, gene transfe.	15

Delivery Plan (Weekly Lab. Syllabus)	
Subject	**Week**

Spontaneous evolution, disease	1
Koch's postulates.	2
Cultural characteristics, morphology. Metabolic properties – chemical properties, genetic properties, taxonomic classification of microorganisms.	3
Bacterial structure and functions of its parts. External structures – flagella, cilia, cell wall; internal structures – plasma membrane, ribosomes, genetic material.	4
Bacterial nutrition – bacterial culture media.	5
Isolation of bacteria in pure culture; preservation of bacterial cultures.	6
Mycoplasma, phytoplasma, rickettsia.	7
First monthly exam.	8
Physical and chemical properties of enzymes. Specialization:	9
DNA replication, RNA transcription, protein synthesis, bacterial heterogeneity, genetic mutations, gene exchange (conjugation), genetic transformation, gene transfer.	10
Animal viruses, plant viruses, importance of viruses, viroids.	11
Fungi. External Appearance, Parasitism, Fungal Cell Structure	12
Food Contamination, Control of Contamination Sources, Microorganisms in Milk and Dairy Products, Microorganisms in Fruits and Vegetables. Microbial Food Spoilage, Microorganisms and Food Processing, Food Poisoning.	13
The Relationship Between Microorganisms and Humans, Microorganisms Naturally Found in the Human Body (Their Benefits and Harms).	14
Antibody-Antigone Interactions, Immunological Tests, Antibiotics, Antibiotic-Producing Organisms.	15

Learning and Teaching Resources

	Text	Available in the Library?
Required Texts	Microbiology book	Yes

Recommended Texts	(journals, reports), electronic references, websites.	No

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

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	**Insect classification**			**Module Delivery**	
Module Type	**C**			☐**Theory** ☒ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	PP221				
ECTS Credits	7				
SWL (hr/sem)	**175**				
Module Level	1		**Semester of Delivery**	2	
Administering Department	Plant Protection		**College**	Agri.	
Module Leader	Dr. Amer Jassim Aboud + Dr. Sabreen Hadi Hanash		**e-mail**	aabbood@uowasit.edu.iq	
Module Leader's Acad. Title	Assist. Lect.		**Module Leader's Qualification**	PhD	
Module Tutor	Name		**e-mail**	E-mail	
Peer Reviewer Name	Name		**e-mail**	E-mail	
Scientific Committee Approval Date	3/03/2026		**Version Number**	1.0	

Relation with other Modules			
Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents	
Identifying and classifying insects	**Module Objectives**
- Preparing students specializing in insect classification based on external appearance	**Module Learning Outcomes**
- Conducting observations on insect classification and classification	**Indicative Contents**

Learning and Teaching Strategies

- Teamwork through class discussions and collaborative activities. - Using multimedia, such as educational videos and presentations, to explain content.	

Student Workload (SWL)			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	30	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**50**		

Module Evaluation

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Tests	1	10% (10)	15	LO #1 - #14
	College assignments	1	10% (10)	14	LO # 8- #13
	Homework	1	10% (10)	6	LO #1 - #5
	Reports	1	10% (10)	5	LO #1 - #4
Summative assessment	Midterm exam	2hr	10% (10)	8	LO #1 - #7
	Final exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

Subject	Week
Taxonomy: Definition, Relationship to Other Sciences, and Stages of Development	1
Modern Taxonomy and Comparison with Ancient Taxonomy, Classification Ranks, Formation of Lifestyles with Examples	2
Insect Classification, Taxonomic Class, and Stratification System with Examples	3
Introduction to the Origin of Arthropoda, Stages of Insect Evolution, and Relatedness, Taxonomic Table of Insects	4
Description of Insects: Classification and Suborders	5
First Semester Exam	6
Types and Styles of Museum Collections with Examples	7
Individual Variations: Types and Reasons for Their Appearance with Examples	8
Scientific Nomenclature and Its Requirements, Writing the Scientific Name, Taxonomic Keys with Examples	9
Identifying Species and Taxonomic Differentiation with Examples	10
Taxonomic Characteristics and Geographical Distribution of Organisms by Geographical Region wit Examples	11
Second Semester Exam	12
Taxonomic Ranks and Their Foundations	13
Kingdom, Phylum, Class, Order, Family, Genus, Species	14
Taxonomic Keys for Insect Orders	15

Delivery Plan (Weekly Lab. Syllabus)	
Subject	**Week**
Taxonomy: Definition and Stages of Development	1
Taxonomic Ranks, Lifestyles with Examples	2
Insect Classification	3

Arthropoda with Stages of Insect Emergence, Taxonomic Table of Insects	4
Describe Insects	5
First Semester Exam	6
Types of Museum Collections and Styles with Examples	7
Individual Variations	8
Scientific Nomenclature and its Requirements, Writing the Scientific Name, Taxonomic Keys with Examples	9
Identifying Species	10
Taxonomic Characteristics and Geographical Distribution of Organisms	11
Second Semester Exam	12
Taxonomic Ranks	13
Kingdom, Phylum, Class, Order, Family, Genus, Species	14
Taxonomic Keys for Insect Orders	15

Learning and Teaching Resources

	Text	Available in the Library?
Required Texts	Classification book	Yes
Recommended Texts	(journals, reports), electronic references, websites.	No

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	**FX –** Fail		(45-49)	More work required but credit awarded
(0 – 49)	**F –** Fail		(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

Course Information					
Module Title	Sarcophagous Insects (Saprophagous / Detritivores)			Module Delivery	
Module Type	Basic			☒ Theory ☒ Lecture ☐ Lab ☐ Tutorial ☒ Practical ☑ Seminar	
Module Code	PP212				
ECTS Credits	**5**				
SWL (hr/sem)	**125**				
Module Level	1		Semester of Delivery	**1**	
Administering Department	Department of Plant Protection		College	College of Agriculture	
Module Leader	Qais Mari Al-Abousi		e-mail	khmurri@uowasit.edu.iq	
Module Leader's Acad. Title	Assistant Professor		Module Leader's Qualification	PhD	
Module Tutor			e-mail		
Peer Reviewer Name	Name		e-mail	E-mail	
Scientific Committee Approval Date	3/03/2026		Version Number	1.0	

Relation with other Modules			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
1. Identifying types of saprophytic insects Introducing students to groups of non-insect animal pests such as: • Flies • Beetles. • The floor • Some non-insect arthropods (spiders, ticks, mites)	Module Objectives Objectives of the study subject •

2. Understanding the life cycle of saprophytic insects. • Studying the biology and reproduction of these organisms. • Understanding the environmental conditions that contribute to its spread. 3. Assess insect damage • Its impact on food production. • Its role in environmental balance • Economic damage caused by insects. 4. Raising awareness of the importance of ecological balance • Understanding the role of these organisms in the ecosystem and not eliminating them completely, but managing them in a balanced way. • Studying the side effects of pesticides on the environment and non-target organisms. 5. Developing research and practical application skill • Training students to diagnose saprophytic insects in the field • Learning how to prepare infestation reports and propose practical solutions 6. Linking the material to modern application • Using technology in insect monitoring (such as AI-powered monitoring systems)	
First: Cognitive Outcomes (Knowledge and Understanding) 1. Identifying the classification of saprophytic insects in terms of: • Understanding the biological and behavioral characteristics of each group. 2. Understanding the benefits of these insects towards dead carcasses in maintaining ecological balance. 3. Understanding ways to utilize them through: • Evaluating the advantages and disadvantages of each method. Second: Skills Outcomes (Practical Application) 1. Diagnosing pests and assessing infestations in terms of: • . The ability to distinguish between types of saprophytic insects. • Using the necessary tools and equipment for monitoring (such as traps, thermal cameras). 2. Analyzing data and preparing reports in terms of: • Recording insect spread data and analyzing it statistically. • Writing technical reports on infestation cases and proposing solutions. Third: Behavioral Outcomes (Values and Responsibility in terms of: 1. Commitment to biosafety and ethics as follows:	Module Learning Outcomes • Learning Outcomes for the Subject Course

• Applying safety procedures when using pesticides or hazardous tools to obtain them for study. • Considering the ecological balance. 2. Teamwork and leadership in terms of: • Participating in work teams to study insect problems in the field. • Presenting innovative solutions within research groups. Fourth: Outcomes related to technology and innovation in terms of: 1. Using modern technologies as follows: • Artificial intelligence and remote sensing applications in monitoring saprophytic insects. • Analyzing data using specialized software (such as GIS). 2. Linking the subject to practical reality in terms of: • Case studies on the presence of saprophytic insects and how to deal with them. Fifth: Evaluative outputs of the effectiveness of monitoring programs through: • Measuring the success of the applied monitoring methods and modifying them according to the results. • Providing recommendations for improving insect management in the future	
The guidelines for the saprophytic insect course for agricultural college students include the following topics: 1. General Introduction to Saprophytic Insects • Definition of saprophytic insects and their economic and environmental importance. • The difference between insect and non-insect pests. • The role of these pests in disease transmission and crop damage. 2. Classification and Biology of Saprophytic Insects • Spirit Flies Life cycle, reproduction, and feeding behavior. • Houseflies Environmental conditions that promote their spread. Their impact on crops, especially vegetables and field crops. • Beetles Feeding and reproductive behaviors. Methods for mitigating their damage without disrupting the ecological balance. • Stages of decomposition of dead materials 4. Safety and Ethics in Control • Safety procedures and safe handling of equipment • Environmental Responsibility: Avoiding Harm to Beneficial Organisms	Indicative Contents Indicative Content

Learning and Teaching Strategies	
1. Traditional and Interactive Lectures Presentations (PPT): • Using images and videos to illustrate the forms of saprophytic insects. • Mind maps to link saprophytic insect species to their rearing methods. Group Discussions • Discussing real-world case studies on useful situations in the field of saprophytic insects. • Open dialogue on the challenges of integrated pest management. 2. Project-Based Learning (PBL): • Dividing students into groups • Each group studies a specific species of saprophytic insect • Analyzing the insect's life cycle. • Presenting Reports and Presentations • Presenting results via scientific posters or presentations. 2. Experiential Learning: Fieldwork and Laboratories Field Visits • Visiting sites containing dead material and collecting samples. • Laboratory Experiments • Dissecting insect specimens to study their biological structure. • Analyzing damage samples under a microscope. 4. Learning Through Play (Gamification Simulation Games • Managing a Decomposing Carcass Game. • Quick Insect Identification Competitions Among Students. • Using Augmented Reality (AR) • Applications that show the 3D appearance of pests and their methods of spread.ي 5. E-Learning • Online Learning Platforms • Educational Videos on the Pest Life Cycle. • Interactive Quizzes to Measure Comprehension. • Discussion Forums • Discussing modern control methods via platforms such as Moodle or Teams. 6. Assessment Strategies • Continuous Formative Assessment (CPA): • Short Quizzes after each unit. • Assessing participation in discussions and experiments. • Summative Assessment (SU): • Theoretical + Practical Insect Diagnosis Test • Presenting a research project on managing a specific pest.	Strategies

7. Strategies to Enhance Critical Thinking • Analyzing Scientific Articles • Discussion of recent research on saprophytic insects. • Problem-Based Learning (Problem-Solving). • Presenting realistic scenarios about a carcass containing different insect species.	

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem)	78	Structured SWL (h/w)	5
Unstructured SWL (h/sem)	47	Unstructured SWL (h/w)	3
Total SWL (h/sem)	125		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	1	10% (10)	15	LO #1 - #14
	Assignments	1	10% (10)	6	LO #1 - #5
	Projects / Lab.	1	10% (10)	7	LO #1 - #6
	Report	1	10%	**14**	LO #1 - #14
Summative assessment	Midterm Exam	2hr	10% (10)	8	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
Material Covered	

Introduction to Saprophytic Insects (Definition of the concept - Importance in the ecosystem - Role in decomposition and the cycle of elements)	Week 1
Fundamentals of Biological Decomposition (The five stages of decomposition of dead organisms - Influencing environmental factors - The role of microorganisms in the beginning	Week 2
Order of Flies (Muscidae): Classification - Morphological characteristics - Life cycle - Major saprophytic families. Some genera such as Musca	Week 3
Soul Flies (Calliphoridae): Their role in early decomposition - Forensic significance - (Chrysomya and Lucilia) Studying common examples such as	Week 4
Flesh flies (Sarcophagidae, Sarcophaga): Ovulation and larval stages - their importance in decomposition and estimation of time of death (PMI).	Week 5
Coleoptera (Polyphaga): General characteristics - life stages - the relationship of beetles to different stages of decomposition	Week 6
1st Month Exam	Week 7
Carrion beetles (Silphidae) and soldier beetles (Staphylinidae): their role in later stages - predation of fly larvae - ecological importance.	Week 8
Skin beetles: consumption of dry tissue - applications in cleaning bony structures. Dermestes maculatus (Dermestidae): important species such as	Week 9
Ants (Formicidae): the role of social behavior in decomposition - feeding on liquids | - its effect on the growth rate of fly larvae.	Week 10
Cockroaches (Blattodea) and their role in the urban environment- Types of cockroaches - Feeding on organic matter - Their relationship to corpses in enclosed environments.	Week 11
Saprophytic insects (Detritivores): The concept of feeding on plant debris - Key examples from beetles and butterfly larvae.	Week 12
Termites in detail: Classification - Life cycle - Role in cellulose decomposition. Environmental and economic impact	Week 13
Forensic and environmental applications: Using insects to estimate time of death - Monitoring ecosystem health - Examples of real-world cases and case studies	Week 14
Second Monthly Exam	Week 15

Delivery Plan (Weekly Lab. Syllabus)	
Material Covered	
Practical Introduction to Insects: Saprophytic Feeding and its Role in Decomposition (Display of preserved insect specimens (flies, beetles, ants). Mini-experiment: Placing a piece of meat in a mesh tray to monitor decomposition over the next weeks.	Week 1
Houseflies (Mucidae): Classification – Life Cycle – Major Genera	Week 2
Classification of Insects (Calliphoridae and Sarcophagiidae) – and the life cycle of each.	Week 3
Stages of Decomposition: Dead Animals (Fresh Stage), Sensory Changes (Odor, Bloating), and the Nature of the Insects Found on Them. A diagram illustrating the beginning of decomposition and its relationship to environmental factors.	Week 4
Second Stages of Decomposition (Bloating and Early Insect Activity) and the Nature of Saprophytic Insects on Them	Week 5
Field Trip to Collect Various Saprophytic Insects from Dead Animal or Plant Remains	Week 6
First Monthly Exam	Week 7
Larval Characteristics of Flies of Various Types, Determining Their Ages and Types of Pupas - Measuring Their Lengths Under a Simple Microscope	Week 8
Stages of Active Decomposition: Intense Insect Activity and the Feeding Method of Saprophytic Insects (Studying Major Changes on the Sample - Decomposition of Soft Tissues - Collecting Larger Numbers of Larvae and Early Beetles)	Week 9
Morphological Description of Beetles - Their Role in the Late Decomposition Stage of Dead Organisms; Method of Collecting Carrion Beetles and Soldier Beetles from the Sample)	Week 10
Saprophytic Activity of Skin Beetles and Their Role in Cleaning Bones (Beginning of Skin Beetle Appearance); Drawing a Short Life Cycle of Skin Beetles and Their Role in the Final Stages	Week 11
Saprophytic Insects on Plants (Detritivores) Methods of collecting decaying leaves and wood. Note the presence of termites and plant beetles. Biodiversity of plant insects and their role in recycling	Week 12
Feeding behavior of cockroaches and its relation to organic waste. Life cycle of cockroaches and non-specialized insects in a simplified manner	Week 13
Second Monthly Exam	Week 14

Comprehensive Review	Week 15

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	Gennard, D. E. (2012). Forensic Entomology: An Introduction (2nd ed.). Wiley-Blackwell. Smith, K. G. V. (1986). A Manual of Forensic Entomology. Cornell University Press. Mullen, G. R. & Durden, L. A. (2019). Medical and Veterinary Entomology (3rd ed.). Academic Press. Triplehorn, C. A. & Johnson, N. F. (2005). Borror and DeLong's Introduction to the Study of Insects (7th ed.). Thomson Brooks/Cole.	Yes
Recommended Texts	.Reputable scientific journals, scientific reports	Yes
Websites		

Grading Scheme				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	Excellent	90 - 100	Outstanding Performance
	B - Very Good	Very Good	80 - 89	Above average with some errors
	C - Good	Good	70 - 79	Sound work with notable errors
	D - Satisfactory	Average Grade	60 - 69	Fair but with major shortcomings
	E - Sufficient	Acceptable	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	Failed (In Progress)	(45-49)	More work required but credit awarded
	F – Fail	Failed	(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	**Principles of plant physiology**			**Module Delivery**	
Module Type	**C**			☐**Theory** ☒ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	PP226				
ECTS Credits	7				
SWL (hr/sem)	**175**				
Module Level	1		**Semester of Delivery**	2	
Administering Department	Plant Protection		**College**	Agri.	
Module Leader	Dr. Nabeel Raheem Lahmood+ Wamadh Majeed		**e-mail**	nraheem@uowasit.edu.iq	
Module Leader's Acad. Title	Prof.		**Module Leader's Qualification**	PhD	
Module Tutor	Name		**e-mail**	E-mail	
Peer Reviewer Name	Name		**e-mail**	E-mail	
Scientific Committee Approval Date	14/10/2025		**Version Number**	1.0	

Relation with other Modules			
Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents	
Introduction to plant physiology	**Module Objectives**
	Module Learning Outcomes
Preparing students specializing in plants	**Indicative Contents**

Learning and Teaching Strategies

- Teamwork through class discussions and collaborative activities. - Using multimedia, such as educational videos and presentations, to explain content.	

Student Workload (SWL)			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	30	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**50**		

Module Evaluation

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Tests	1	10% (10)	15	LO #1 - #14
	College assignments	1	10% (10)	14	LO # 8- #13
	Homework	1	10% (10)	6	LO #1 - #5
	Reports	1	10% (10)	5	LO #1 - #4
Summative assessment	Midterm exam	2hr	10% (10)	8	LO #1 - #7
	Final exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

Subject	Week
Gadama in plant physiology: the concept of plant physiology and its importance	1
Interests in other sciences, the composition of plant cells, organs and functions, and interests in physiological processes.	2
Water and water relations in plants: properties of water, diffusion, osmosis	3
Electrical potential, components of electrical potential, water movement in plant cells.	4
Absorption of water and respiration: absorption of water by roots.	5
water pathways in roots, water transport in wood, respiration, types of respiration, factors affectir respiration and its importance	6
Mineral nutrition for plants: essential nutrients, major and minor elements	7
functions of elements, symptoms of element deficiency, absorption of ions and transport inside th plant.	8
Photosynthesis - the first part: the concept of photosynthesis and its importance	9
Green plastid, photosynthesis pigments, light absorption, photoreactions, electron transport .chain	10
Photosynthesis - second part: photophosphorylation	11
ATP and NADPH production, carbon dioxide fixation, Calvin cycle, factors affecting .photosynthesis	12
Pathways of photosynthesis: C3 plants, C4 plants, CAM plants	13
Physiological differences between them, water recruitment efficiency, effect of temperature, light intensity and CO_2 concentration.	14
Respiration in plants: the concept of respiration and its importance, glycolysis, Krebs cycle, electron transport chain, oxidative phosphorylation, anaerobic respiration and factors affecting respiration.	15

Delivery Plan (Weekly Lab. Syllabus)	
Subject	**Week**
Ancient in plant stem and plant cell.	1

Water and water relations.	2
Water absorption and respiration.	3
Mineral nutrition.	4
Photosynthesis and photoreactions.	5
Calf cycle and CO_2 fixation.	6
C3, C4 and CAM pathways.	7
Breathing in plants.	8
Transport in wood and bark.	9
Plant growth and development.	10
Oxinate and gibberellinate and cytokininate.	11
ABA, ethylene and growth regulations.	12
Vegetative movements and responses.	13
Al-Izhar, Al-Furatrah, Al-Firanla, and Ithmaar.	14
Vegetative stress, metabolism, and comprehensive review.	15

Learning and Teaching Resources

	Text	Available in the Library?
Required Texts	Plant physiology book	Yes
Recommended Texts	(journals, reports), electronic references, websites.	No

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	**FX –** Fail		(45-49)	More work required but credit awarded
(0 – 49)	**F –** Fail		(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	**Plant Ecology**			**Module Delivery**	
Module Type	**C**			☐**Theory** ☒ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	PP227				
ECTS Credits	7				
SWL (hr/sem)	**175**				
Module Level		1	**Semester of Delivery**		2
Administering Department		Plant Protection	**College**	Agri.	
Module Leader	Dr. Mohaned Ismeal+ Hussiean Saaed		**e-mail**	albwmohanad@uowasit.edu.iq	
Module Leader's Acad. Title		Assist. Prof.	**Module Leader's Qualification**		PhD
Module Tutor	Name		**e-mail**	E-mail	
Peer Reviewer Name		Name	**e-mail**	E-mail	
Scientific Committee Approval Date		3/03/2026	**Version Number**		1.0

Relation with other Modules			
Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents	
Introduction to plant ecology	**Module Objectives**
	Module Learning Outcomes
Preparing students specializing in plants and their ecology	**Indicative Contents**

Learning and Teaching Strategies

- Teamwork through class discussions and collaborative activities. - Using multimedia, such as educational videos and presentations, to explain content.	

Student Workload (SWL)			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	30	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**50**		

Module Evaluation

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Tests	1	10% (10)	15	LO #1 - #14
	College assignments	1	10% (10)	14	LO # 8- #13
	Homework	1	10% (10)	6	LO #1 - #5
	Reports	1	10% (10)	5	LO #1 - #4
Summative assessment	Midterm exam	2hr	10% (10)	8	LO #1 - #7
	Final exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

Subject	Week
Introduction to plant ecology: the concept of ecology, plant ecology	1
branches of ecology, the importance of studying plant ecology, levels of environmental regulation	2
Environmental factors: concept of environmental factor	3
Non-biotic and biotic factors, law of determining factor, law of tolerance, extent of environmental tolerance.	4
Light and interest in plants: sources of light, light intensity	5
Quality and duration, the effect of light on growth and photosynthesis, light-loving plants and shad loving plants.	6
Temperature: the effect of temperature on physiological processes	7
Minimum, ideal and upper temperatures, adaptation to high and low temperatures, damages caus by heat and frost.	8
Water and humidity: the importance of water for plants, sources of water	9
Atmospheric humidity, the effect of water deficiency and excess, aquatic plants, drought-.tolerant plants, and medium-sized plants	10
Soil and plant environment: soil origin, soil components	11
Physical and chemical properties, soil pH, organic matter, soil fertility and interests in plant .growth	12
Atmospheric factors: wind, humidity, rain, atmospheric pressure	13
the effect of wind on plants, evaporation and transpiration, the relationship between , .atmospheric factors and plant growth	14
Salinity and environmental stress: soil and water salinity, effect of salts on plant growth, mechanisms of salinity tolerance, saline plants, salinity and salt stress.	15

Delivery Plan (Weekly Lab. Syllabus)	
Subject	**Week**
the concept of ecology, plant ecology	1

The importance of studying plant ecology, levels of environmental regulation.	2
Environmental factors	3
Law of determining factor, law of tolerance, extent of environmental tolerance.	4
sources of light, light intensity	5
The effect of light on growth and photosynthesis, light-loving plants and shade-loving plants.	6
The effect of temperature on physiological processes	7
Adaptation to high and low temperatures, damages caused by heat and frost.	8
Water and humidity: the importance of water for plants, sources of water	9
The effect of water deficiency and excess, aquatic plants, drought-tolerant plants, and medium-sized plants.	10
Soil and plant environment	11
Physical and chemical properties, soil pH, organic matter, soil fertility and interests in plant growth.	12
Atmospheric factors: wind, humidity, rain, atmospheric pressure	13
Evaporation and transpiration, the relationship between atmospheric factors and plant growth.	14
Effect of salts on plant growth, mechanisms of salinity tolerance, saline plants, salinity and salt stress.	15

Learning and Teaching Resources

	Text	Available in the Library?
Required Texts	Ecology plant book	Yes
Recommended Texts	(journals, reports), electronic references, websites.	No

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

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	**Computer 2**			**Module Delivery**	
Module Type	**B**			☐**Theory** ☒ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	WU201				
ECTS Credits	2				
SWL (hr/sem)	**50**				
Module Level	1		**Semester of Delivery**	2	
Administering Department	Plant Protection		**College**	Agri.	
Module Leader	Dr. Karrar Qasim		**e-mail**	KarraralAhmedi@uowasit.edu.iq	
Module Leader's Acad. Title	Assist. Lectur.		**Module Leader's Qualification**	PhD	
Module Tutor	Name		**e-mail**	E-mail	
Peer Reviewer Name	Name		**e-mail**	E-mail	
Scientific Committee Approval Date	3/03/2026		**Version Number**	1.0	

Relation with other Modules			
Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents	
- Learning about computer applications	**Module Objectives**
- Preparing students to specialize in computer use	**Module Learning Outcomes**
- Performing some operations in computer applications	**Indicative Contents**

Learning and Teaching Strategies

- Teamwork through class discussions and collaborative activities. - Using multimedia, such as educational videos and presentations, to explain content.	

Student Workload (SWL)			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	30	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**50**		

Module Evaluation

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Tests	1	10% (10)	15	LO #1 - #14
	College assignments	1	10% (10)	14	LO # 8- #13
	Homework	1	10% (10)	6	LO #1 - #5
	Reports	1	10% (10)	5	LO #1 - #4
Summative assessment	Midterm exam	2hr	10% (10)	8	LO #1 - #7
	Final exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

Subject	Week
Introduction to computers, their components	1
Operating systems	2
File and folder management	3
operating system usage.	4
Microsoft Word: Creating and formatting documents.	5
Inserting tables, images, and charts in Word.	6
Microsoft Excel: Working with worksheets.	7
Data entry, formatting, and formula use in Excel.	8
Basic functions and creating tables in Excel.	9
Graphs and data representation using Excel.	10
Microsoft PowerPoint: Creating presentations.	11
Formatting slides and inserting images, tables, and charts.	12
The internet, search engines, and email.	13
Using electronic resources, databases, and conducting scientific research.	14
Entering and analyzing scientific data using Excel.	15

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts	computer book	Yes
Recommended Texts	(journals, reports), electronic references, websites.	No

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

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MODULE DESCRIPTION FORM

Module Information					
Module Title	**Arabic language 2**			**Module Delivery**	
Module Type	**B**			☐**Theory** ☒ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	WU202				
ECTS Credits	2				
SWL (hr/sem)	**50**				
Module Level	1		**Semester of Delivery**	2	
Administering Department	Plant Protection		**College**	Agri.	
Module Leader	Dr. Arkan Mosa		**e-mail**		
Module Leader's Acad. Title	Assist. Lectur.		**Module Leader's Qualification**	PhD	
Module Tutor	Name		**e-mail**	E-mail	
Peer Reviewer Name	Name		**e-mail**	E-mail	
Scientific Committee Approval Date	14/10/20265		**Version Number**	1.0	

Relation with other Modules			
Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents	
- Understanding the fundamentals of the Arabic language	**Module Objectives**
	Module Learning Outcomes
- Preparing students specializing in the Arabic language	**Indicative Contents**

Learning and Teaching Strategies

- Teamwork through class discussions and collaborative activities. - Using multimedia, such as educational videos and presentations, to explain content.	

Student Workload (SWL)			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	30	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**50**		

Module Evaluation

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Tests	1	10% (10)	15	LO #1 - #14
	College assignments	1	10% (10)	14	LO # 8- #13
	Homework	1	10% (10)	6	LO #1 - #5
	Reports	1	10% (10)	5	LO #1 - #4
Summative assessment	Midterm exam	2hr	10% (10)	8	LO #1 - #7
	Final exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

Subject	Week
The subject and predicate and their types.	1
The verbs of being and its sisters.	2
The particles of emphasis (إنّ) and its sisters.	3
The subject and the passive subject.	4
The object and other objects.	5
The adverbial phrase, the accusative of specification, and the exception.	6
The adjective, the conjunction, the emphasis, and the apposition.	7
First exam	8
The nominal sentence and the verbal sentence.	9
Conditional, interrogative, and negative constructions.	10
The imperative, prohibitive, and exclamatory styles.	11
Spelling: Hamzas and punctuation marks.	12
Functional writing and summarizing.	13
Expression and academic writing skills.	14
Second exam	15

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts	Arabic book	Yes
Recommended Texts	(journals, reports), electronic references, websites.	No

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

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MODULE DESCRIPTION FORM

Module Information					
Module Title	**machinery and equipment**			**Module Delivery**	
Module Type	**C**			☐**Theory** ☒ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	PP225				
ECTS Credits	7				
SWL (hr/sem)	**175**				
Module Level		1	**Semester of Delivery**		2
Administering Department		Plant Protection	**College**	Agri.	
Module Leader	Dr. Ahmed Abed Gatea+ Karrar Qasim		**e-mail**	agatea@uowasit.edu.iq	
Module Leader's Acad. Title		Assist. Prof.	**Module Leader's Qualification**		PhD
Module Tutor	Name		**e-mail**	E-mail	
Peer Reviewer Name		Name	**e-mail**	E-mail	
Scientific Committee Approval Date		14/10/2025	**Version Number**		1.0

Relation with other Modules			
Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents	
-Identifying the main components of agricultural machinery	**Module Objectives**
	Module Learning Outcomes
- Preparing students to specialize in the knowledge of key agricultural machinery and equipment	**Indicative Contents**

Learning and Teaching Strategies

- Teamwork through class discussions and collaborative activities. - Using multimedia, such as educational videos and presentations, to explain content.	

Student Workload (SWL)			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	30	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**50**		

Module Evaluation

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Tests	1	10% (10)	15	LO #1 - #14
	College assignments	1	10% (10)	14	LO # 8- #13
	Homework	1	10% (10)	6	LO #1 - #5
	Reports	1	10% (10)	5	LO #1 - #4
Summative assessment	Midterm exam	2hr	10% (10)	8	LO #1 - #7
	Final exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

Subject	Week
Introduction to Pest Control Machinery	1
Equipment and Their Importance	2
Types of Agricultural Pest Control Machinery and Equipment.	3
Types of Agricultural Pest Control Machinery and Equipment.	4
Agricultural Sprayers	5
Types and Components.	6
Backpack and Hand Sprayers: How to Use Them.	7
First exam	8
Field Sprayers and Aerial Sprayers.	9
Sprayer Parts: Functions and Maintenance.	10
Spray Nozzles: Types and Selection.	11
Calibration of Spraying Equipment and Calculation of Spray Rate.	12
Granular Pesticide Application Machines and Equipment.	13
Dusting Equipment and Powdered Pesticide Application.	14
Weed Control Equipment and the Machinery Used.	15

Delivery Plan (Weekly Lab. Syllabus)	
Subject	**Week**
Pest control equipment and its components.	1
Using the manual backpack sprayer and its parts.	2
Disassembling, assembling, and cleaning the sprayer.	3
Identifying the types of spray nozzles and their uses.	4
Pumps, hoses, and filters.	5

Calibrating sprayers and calculating the spray rate.	6
First exam	7
Practical application of manual and field spraying.	8
Using and adjusting field sprayers.	9
Identifying dusting equipment and how to operate it.	10
Identifying and using granular pesticide dispersers.	11
Weed control equipment and its practical applications.	12
Pest control equipment in greenhouses and storage facilities.	13
Maintenance of control equipment and troubleshooting minor malfunctions.	14
Second exam	15

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts	machinery and equipment book	Yes
Recommended Texts	(journals, reports), electronic references, websites.	No

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
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