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

Description of the academic program and course of study for the

Department of Food Science
Faculty of

Agriculture / Maysan University
For the academic year 2024/2025

2024

Academic Program Description Form

University Name: Misan University

Faculty/Institute: College of Agriculture

Scientific Department: Food Science

Academic or Professional Program Name: .....

Final Certificate Name: .....

Academic System: .....

Description Preparation Date:

File Completion Date:

Signature:

Head of Department Name:
Anwaar Yasser Husein

Date:

Signature:

Scientific Associate Name:
Ahmed Malik Sumeah

Date:

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date:

Signature:

Salah Abdulhasan Ghailan

Approval of the Dean

Introduction:

The educational program is a coordinated and organized package of courses that include organized procedures in the form of academic vocabulary, the main purpose of which is to build and refine the skills of graduates, and make them qualified to meet the requirements of the labor market. The academic program description provides a brief summary of the main specifications of the academic program followed to gain solid scientific skills that are compatible with the labor market, and the importance of this description is evident because it represents the cornerstone of obtaining program accreditation, and faculty members participate in writing it under the supervision of scientific committees in scientific departments. This guide includes in its first edition a description of the academic program followed in the Department of Food Science for the academic year 2023/2024. The academic program description also provides students with a comprehensive view of what they can expect from their academic career, from the prerequisites for entry to the career opportunities available after graduation. Courses are addressed as essential parts within this framework, where each course is defined by its objectives, content, and methods of evaluation, helping students understand what will be taught and how to achieve academic success. , and In this regard, we can only emphasize the importance of writing a description of academic programs and courses to ensure the proper functioning of the educational process.

Program Vision

Developing the skills of undergraduate students to assume active roles in the food industry and food processing laboratories, detecting food spoilage and corruption, food security and food safety in food stores, marketing, standardization and quality control devices, which in turn enhances the labor market and develops effective solutions to food problems in line with the existing challenges in local and global food security, developing scientific research that contributes to the progress of society, and strengthening cooperation and partnerships with academic and professional institutions locally and internationally. It is hoped that the Department of Food Science will be a center for teaching, learning, research and consulting in the field of food science and technology, food quality and human nutrition in the future.

.

program Mission

Developing and transferring knowledge and expertise in the fields of food science and processing, providing sources of knowledge and research and training capabilities to develop the department's graduates by preparing qualified cadres for the labor market with bachelor's degrees, encouraging scientific research, innovation and solving problems facing the food industry sector. In addition to the advisory role to serve and develop work in the field of food science and processing and community service.

Program Objectives

- ✓ Qualifying specialists in the fields of food science and human nutrition with knowledge and skills appropriate to the labor market, by providing high-quality academic programs at the university level
- ✓ Developing knowledge in the fields of food science, human nutrition and therapeutic nutrition through conducting creative applied research
- ✓ Holding scientific workshops and seminars on healthy food and nutrition in cooperation with institutions interested in health and food locally and globally.
- ✓ Spreading knowledge in the fields of food science and human nutrition and communicating with the community to educate for healthy food programs

- ✓ Educating the community about the role of nutrition in supporting health and preventing diseases and the importance of eliminating wrong food methods
- ✓ Community service and providing technical advice to food manufacturers and nutrition supervisors
- ✓ Developing continuous training programs for graduates to keep pace with the latest scientific developments in the field of specialization

First semester

MODULE DESCRIPTION FORM

Module Information معلومات المادة الدراسية		
Module Title	**English language**	**Module Delivery**
Module Type	**Basic**	**☒Theory**

Module Code	**UOM 120**			☐**Lecture** ☐**Lab** ☐**Tutorial** ☐**Practical** ☐**Seminar**
ECTS Credits	**2**			
SWL (hr/sem)	**50**			
Module Level	U(	**Semester of Delivery**	1	
Administering Department	**FOOD SCEINCE**	**College**	**Agriculture**	
Module Leader	Name	**e-mail**	E-mail	
Module Leader's Acad. Title	. Prof.	**Module Leader's Qualification**	Ph.D.	
Module Tutor	Dr. Azalldeen kazalAlzubaidi	**e-mail**	ez_aldeen@uomisan.edu.iq	
Peer Reviewer Name	Name			
Scientific Committee Approval Date	01/10/2024	**Version Number**	1.0	

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Objectives أهداف المادة الدراسية	1-The aim of this course is to provide English learners with integrated language skills such as reading, listening and writing resulting in a level of basic language knowledge. 2-This course will focus on grammar rules, basic word knowledge and usage, reading comprehension, reading out of the lesson, and Paragraph writing. 3- A student may be able to listen to native speakers and speak English Language. 4- A student may be able to write and have creativity in his writing.

Module Learning Outcomes مخرجات التعلم للمادة الدراسية	. 1- Uses expressions of Quantity in elementary level of English. 2- Constructs sentences in Present Perfect Tense, Simple Future Tense and Going to Future Tense both in an oral and written task. 3- Defines basic Modals and employ them in elementary level of communication and writing skills. 4- Translates sentences in elementary level from English to another language. 5- Interprets the texts written in elementary level of English.
Indicative Contents المحتويات الإرشادية	Language is a rule-governed behavior. It is defined as the comprehension and/or use of a spoken (i.e., listening and speaking), written (i.e., reading and writing), and/or other communication symbol system (e.g., American Sign Language). Spoken and written language are composed of receptive (i.e., listening and reading) and expressive (i.e., speaking and writing) components. Spoken language, written language, and their associated components (i.e., receptive and expressive) are each a synergistic system comprised of individual language domains (i.e., phonology, morphology, syntax, semantics, pragmatics) that form a dynamic integrative whole Phonology study of the speech sound (i.e., phoneme) system of a language, including the rules for combining and using phonemes. Morphology study of the rules that govern how morphemes, the minimal meaningful units of language, are used in a language. Syntax the rules that pertain to the ways in which words can be combined to form sentences in a language. Semantics the meaning of words and combinations of words in a language.

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	Enable students to recognize: - 1 Enabling students to communicate effectively and appropriately in real-life situations. - 2Enabling students to use the English language effectively for the purpose of study across the curriculum. - 3 Enabling students to develop and integrate the use of the four language skills: reading, listening, speaking and writing. - 4 Enabling students to develop interest in and learn about literature. 5- Enable students to review and reinforce the structure that has already been learned

Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	2	**Structured SWL (h/sem)** الحمل الدراسي المنتظم للطالب خلال الفصل	32
Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	2	**Unstructured SWL (h/sem)** الحمل الدراسي غير المنتظم للطالب خلال الفصل	18
		Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**50**

Module Evaluation

تقييم المادة الدراسية

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

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Present simple

Week 2	Past simple
Week 3	Reading
Week 4	Future simple
Week 5	Listening and answering the questions
Week 6	Quiz
Week 7	Opposites and synonyms
Week 8	Writing paragraph
Week 9	Reading Stories
Week 10	Quiz
Week 11	Quantity
Week 12	Writing
Week 13	Similarities
Week 14	Listening and Writing vocabularies
Week 15	EXAM

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	**Available in the Library?**
Required Texts	Yule, G. (2015). Oxford practice grammar advanced. Oxford University Press. Alexander, L. G. (2019). Longman English grammar practice. Addison Wesley.-	Yes
Recommended Texts	Various university research and dissertations in the English language related to animal productio	
Websites	https://agendaweb.org/listening/dictations.html	

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

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

MODULE DESCRIPTION FORM

Module Information		
Module Title	**Democracy and Human Rights**	**Module Delivery**
Module Type	**Basic**	**☒ Theory** **☐Lecture**
Module Code	**UOB104**	
ECTS Credits	**2**	

SWL (hr/sem)	**50**	☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**

Module Level	UGx11 1	**Semester of Delivery**	**1**
Administering Department	Food sciences	**College**	**Agriculture**
Module Leader		**e-mail**	
Module Leader's Acad. Title	Assistant teacher	**Module Leader's Qualification**	M.SC.
Module Tutor	Hussein Zughair Jassim	**e-mail**	hussein.zghair@uomisan.edu.iq
Peer Reviewer Name		**e-mail**	
Scientific Committee Approval Date		**Version Number**	

Relation with other Modules

Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents

Module Objectives أهداف المادة الدراسية	Teaching students the basics of human rights and their laws.1 . Identify the most important rights and the most important problems and .2 challenges they face . Identify and understand concepts related to our freedoms, including individual .3 rights and personal freedoms Developing the ability to think critically about issues related to individual .4 freedoms and rights
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	. The student should know the concept of rights, their laws and applications-1 he student should know how to participate in spreading rights and their .2 applications through real, practical work The ability to use rights as a means for peaceful coexistence among the -3 components of society The ability to share these rights with others. . -4 The ability to analyze and define the concept of freedom and distinguish ا-5 between different types of freedoms Interacting with freedom issues at the national and international levels and -6

	influencing the formation of public opinion.
Indicative Contents المحتويات الإرشادية	Fundamental and non-fundamental rights and freedoms Civil rights and liberties political rights Human Rights and International Humanitarian Law

Learning and Teaching Strategies

Strategies	Participate in classroom preparation.1 Question and answer method in the classroom -2 Duties -3 Reports -4

Student Workload (SWL)

Structured SWL (h/sem)	32	**Structured SWL (h/w)**	3
Unstructured SWL (h/sem)	18	**Unstructured SWL (h/w)**	1
Total SWL (h/sem)	50		

Module Evaluation

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

Delivery Plan (Weekly Syllabus)

Week	Material Covered
Week 1	**Definition of rights**
Week 2	Types of human rights
Week 3	**ndamental and non–fundamental rights**
Week 4	Civil and political rights
Week 5	Economic, social and cultural rights, individual rights and collective rights
Week 6	New Rights Sect Human Rights and International Humanitarian Law The Relationship Between Human Rights and International Humanitarian Law
Week 7	Exam
Week 8	What is the concept of freedoms? The term freedom and public freedoms
Week 9	**The evolution of the concept of public freedoms**
Week 10	Forms and types of public freedoms
Week 11	The legal system of public freedoms
Week 12	**Regulation of public freedoms by public authorities**
Week 13	Guarantees of public freedoms
Week 14	Freedoms in modern political thought
Week 15	**final exam**

Learning and Teaching Resources

	Text	Available in the Library?
Required Texts	Diamond L. & M. F. Plattner, eds., (2009), Democracy. A Reader, Baltimore, Johns Hopkins University Press.	Yes
Recommended Texts	مفهوم الحريات العامة وحقوق الانسان، اطارها التاريخي والفكري والفلسفي، وضماناتها الأساسية	
Websites	http://ghrorg-learning.blogspot.com	

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

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

MODULE DESCRIPTION FORM

Module Information			
Module Title	**Engineering Drawing**	**Module Delivery**	
Module Type	**BASIC**	☒**Lab** ☒ **Tutorial** ☒ **Practical**	
Module Code	**ENDR117**		
ECTS Credits	**7**		
SWL (hr/sem)	**175**		
Module Level	U	**Semester of Delivery**	2
Administering Department		**College**	Agriculture
Module Leader		**e-mail**	E-mail
Module Leader's Acad. Title	Asis prof .	**Module Leader's Qualification**	Msc.
Module Tutor	Ali Abbas Hashim	**e-mail**	ali_abbas@uomisan.edu.iq
Peer Reviewer Name		**e-mail**	E-mail .

Scientific Committee Approval Date	01/10/2024	**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 أهداف المادة الدراسية	• Working in the field of engineering drawing to create engineering plans and drawings • Obtaining the skills required for the post-graduation plan (postgraduate studies). • Applying for external tests by local/regional/international bodies. · Providing students with skills to work in scientific and research laboratories and study engineering drawing
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1- Learn about manual drawing tools and modern methods 2- Correct installation of the drawing board and implementation of the information table 3- Professional drawing of lines, curves and circles 4- Drawing of projections 5- Other methods for drawing projections 6- Perspective drawing 7- Section drawing, shading and drawing hidden parts 8- Detailed drawing 9- Assembly drawing 10- Inking 11- Methods of saving drawing boards 12- Quick drawing 13- Documenting and authenticating the boards

	14- Executive drawing 15- Learn about automated drawing
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. - Accuracy - Imagination - Clear ideas before starting to draw - Taking into account all dimensions includes the dimensions of the size and the dimensions of the site - Take all the information, date and ratification Determine the shades of the cut, the vehicle and the hidden parts - Setting details to read the painting and all process and assembly fees - Clean and taking into account the conditions for saving paintings

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

Student Workload (SWL)			
Structured SWL (h/sem)	48	**Structured SWL (h/w)**	3
Unstructured SWL (h/sem)	127	**Unstructured SWL (h/w)**	5
Total SWL (h/sem)	**175**		

Module Evaluation

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	5	5%(5)	5 and 10	All 3 h Structured
	Assignments	5	5% (5)	2 and 15	All 3 h Structured
	Projects / Lab.	10	20% (20)	Continuous	All hours Structured
	Report	0	0	0	
Summative assessment	Midterm Exam	2hr	10% (10)	7	The Structured after 7 week
	Final Exam	3hr	50% (50)	16	The Structured all 16 week
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Lab. Syllabus)

	Material Covered
Week 1	Introduction to engineering drawing tools
Week 2	Introduction to the types of engineering drawing lines
Week 3	How to plan and install a drawing board
Week 4	Engineering operations, part one, includes A- Bisecting a straight line and B- Bisecting an angle.
Week 5	Engineering operations, part two, includes: C- Draw a pentagon inside a circle.
Week 6	Engineering operations, part three, includes: D- Draw a hexagon given the side length and E- Draw a hexagon surrounding a circle
Week 7	Engineering operations, part four, includes: E- Draw an arc tangent to a straight line
Week 8	Engineering operations, part Five, includes: F- Draw an arc tangent to the circumference of a circle and a known straight line and Draw a tangent to an interior circle.

Week 9	Dimensions of size and dimensions of the site
Week 10	Drawing of the projected (three faces)
Week 11	The drawing of the engineering (six faces)
Week 12	Perspective drawing (model)
Week 13	Draw the pieces and script
Week 14	The concept of detailed and assembly
Week 15	Inheritance
Week 16	The concept of drawing using the machine and Preparatory week before the final Exam

Learning and Teaching Resources

	Text	Available in the Library?
Required Texts	الرسم الهندسي لطلبة كليات الزراعة. د. ناطق صبري حسن9 .	Yes
Recommended Texts	Engineering drawing for engineers and technicians	No
Websites	https://books-library.net/free-1020743869-download	

Grading Scheme

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

MODULE DESCRIPTION FORM

Module Information					
Module Title	**Mathematics**			**Module Delivery**	
Module Type	**Basic**			☒ **Theory** ☐ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**MATH111**				
ECTS Credits	**5**				
SWL (hr/sem)	**125**				
Module Level	UGx11 1		**Semester of Delivery**	1	
Administering Department	قسم علوم الاغذية		**College**	كلية الزراعة	
Module Leader	Name		**e-mail**	E-mail	
Module Leader's Acad. Title	ا.م.د		**Module Leader's Qualification**		
Module Tutor	علي عباس هاشم		**e-mail**	ali_abbas@uomisan.edu.iq	
Peer Reviewer Name	Name		**e-mail**	E-mail	
Scientific Committee Approval Date	1/10/2 024		**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 أهداف المادة الدراسية	● Explain the importance of statistics in the field of data collection and identify methods for tabulating and representing data. ● Develop a scientific understanding of statistical symbols, graphical representation methods, and theories related to statistics and their measures. ● Identify the most important statistical distributions and probability theory. ● Identify relationships between two variables, such as correlation and regression measures.

Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1- Familiarize yourself with the statistical methods for agricultural operations, their organization, presentation, and analysis. 2- Familiarize yourself with the measures of concentration and dispersion related to agricultural production. 3- The student will acquire the skills to understand the normal distribution curve and the standard curve.
Indicative Contents المحتويات الإرشادية	Introducing students to functions. Introducing students to methods for finding the domain of functions. Introducing students to methods for finding the range of functions. Introducing students to methods for finding the limit of functions. Explaining the properties of the limit and methods for finding it at infinity. Introducing students to graphing functions. Introducing students to methods for differentiating functions using the definition and differentiation methods. Explaining to students how to find the equation of the tangent to functions. Explaining the definition of indefinite integral and its properties. Explaining how to calculate definite integral and its properties. Explaining and introducing students to the derivative and integration of trigonometric functions and their properties.

Learning and Teaching Strategies	
Strategies	The main strategy for delivering this unit is to encourage students to engage in exercises while simultaneously honing and expanding their critical thinking skills. This will be achieved through interactive classes and lessons, solving exercises, and examining simple experiments involving sampling activities and how to describe them statistically and analyze them.

Student Workload (SWL)			
Structured SWL (h/sem)	48	**Structured SWL (h/w)**	1
Unstructured SWL (h/sem)	77	**Unstructured SWL (h/w)**	1
Total SWL (h/sem)	**125**		

Module Evaluation

As		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	3	12% (10)	3, 5 and 10	LO #1, #2 , # 3 and #4, #5
	Assignments	3	12% (15)	3, 6 and 12	LO #2, #3 and #4, #5
	Projects / Lab.				
	Report	1	12% (10)	13	LO #2, #3 and #4
Summative assessment	Midterm Exam	2hr	14% (15)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

	Material Covered
Week 1	function
Week 2	Domain of a Function
Week 3	Range of a Function
Week 4	Trigonometric Function
Week 5	Trigonometric Functions Lecture + Exam
Week 6	Graphing a Function
Week 7	Derivative of a Function
Week 8	Equation of the Tangent to a Function
Week 9	Indefinite Integral
Week 10	Definite Integral

Week 11	Trigometric Functions
Week 12	Logarithmic Functions
Week 13	Exponential Functions
Week 14	Integration by Substitution
Week 15	Exam 2

Delivery Plan (Weekly Lab. Syllabus)

	Material Covered
Week 1	
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	

Learning and Teaching Resources

	Text	**Available in the Library?**
Required Texts	Ayres,Frank and Mendelson,Elliott.,(2012),Schaum's Outline of Calculus, 6th Edition. US:McGraw- Hill Thomas, Jr., Weir, Hass, (2014), Thoma's Calculus, 13th Edition. Pearson	Yes
Recommended Texts	Various researches on functions and integrals	No
Websites	Mathway | Algebra Problem Solver	

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

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

MODULE DESCRIPTION FORM

Module Information				
Module Title	**Analysis chemistry**			**Module Delivery**
Module Type	**B**			☒**Theory** ☒**Lecture** ☒**Lab** ☐**Tutorial** ☐**Practical** ☐**Seminar**
Module Code	**ANCH121**			
	7			
SWL (hr/sem)	78			
Module Level	UG	**Semester of Delivery**		1
Administering Department	Food science	**College**		Agriculture
Module Leader		**e-mail**		
Module Leader's Acad. Title	PROF.	**Module Leader's Qualification**		Ph.D.
Module Tutor	Dr. Azalldeen kazalAl	**e-mail**	**e-mail**	ez_aldeen@uomisan.edu.iq ez_aldeen@u

	Asaad shame ez_aldeen@uomisan.			
Peer Reviewer Name	Name	**e-mail**	E-mail	
Scientific Committee Approval Date	01\10\2024	**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 أهداف المادة الدراسية	The curriculum included a general study of chemistry for some of its branches, including theories, laws of solubility and the solubility product constant, giving some examples of them * Objectives of general chemistry By knowing the objectives of general chemistry, the following can be reached:- Student review of his knowledge of chemistry This information is needed throughout the study period Definition of solubility and solubility product constant. Study of atomic structure and atomic theory. Study of atomic quantum numbers. Knowing the electronic arrangement of atoms, ions and transition elements. Study of the periodic table and its properties. The study of a branch of chemistry that deals with radioactivity.
Module Learning Outcomes	The graduate of the department is awarded a degree (Bachelor of Science in general chemistry)

مخرجات التعلم للمادة الدراسية	and acquires the following skills: 1- The ability to apply knowledge of the general chemistry method and related techniques 2- The ability to evaluate and implement experiments. 3- The ability to use ready-made programs to accomplish the required cases. 4- The ability to work with diverse teams. 5- The ability to know and bear responsibility. 6- The ability to communicate. 7- The ability to use skills. 8- The ability to intertwine with other specializations to serve them
Indicative Contents المحتويات الإرشادية	The guiding content includes the following. General chemistry is a set of concepts in chemistry, to prepare the basic atomic structure and electronic distribution of elements - the periodic table and electronic distribution - special bonds - the covalent contribution group and some of its properties - resonance - partial molecules and electronegativity - the kitchen and reduction and oxidation numbers - covalent participation and welcoming structure - planning cooperative metals (VBT) and marine orbits - the theory of valence layer double electron repulsion (VSEPR) - the theory of orbital triad (MOT) - metal ores and how to conduct them (minerals) - processes and reduction and purification - special ionic contribution to the bonds of metal with non-metals and the explanation of their multiple colors. General chemistry also includes organic chemistry, which is one of the most famous sciences of chemistry. Its studies contain the composition, properties and military reactions specific to the compound, i.e. materials containing the element carbon. They are reactions that contain a part of living organisms or are produced by a living organism, and therefore are called organic.

Learning and Teaching Strategies	
Strategies	

Student Workload (SWL)			
Structured SWL (h/sem)	78	**Structured SWL (h/w)**	7

الحمل الدراسي المنتظم للطالب خلال الفصل		الحمل الدراسي المنتظم للطالب أسبوعيا	
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	97	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	6
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**175**		

Module Evaluation

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

Delivery Plan (Weekly Syllabus)

	Material Covered
Week 1	Solubility & Solubility Product Constant
Week 2	Atomic Structure
Week 3	quantum number
Week 4	Electron Configuration of Atom
Week 5	Assignment 1
Week 6	Periodic table

Week 7	Mid-term Exam
Week 8	Atomic Structure
Week 9	Electronic configuration of the basic transition elements
Week 10	Assignment 1
Week 11	Periodic properties of atoms
Week 12	Nuciear chemistry
Week 13	Electronegativity and ionization potential meters
Week 14	Nuclear binding energy
Week 15	**Preparatory week before the final Exam**
Week 16	

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1: Analysis of Cations
Week 2	Lab 2: Analysis of Group 1 Cations
Week 3	Lab 3: Analysis of Group 2 Cations
Week 4	Lab 4: Analysis of Group 3 Cations
Week 5	Lab 5: Analysis of Group 4 Cations
Week 6	Lab 6: Analysis of Group 5 Cations
Week 7	Lab 7: final Exam

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts	[1] Fundamentals of general chemistry	Yes

	[2] basics of quantum chemistry	
Recommended Texts	Pauling, L. (1988). General chemistry. Courier Corporation.	No
Websites		

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

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

MODULE DESCRIPTION FORM

Module Information		
Module Title	**Animal Production**	**Module Delivery**
Module Type	**Basic**	☒**Theory**

Module Code	**ANPR123**		☒ Lecture ☐ Lab ☐ Tutorial ☒ Practical Seminar	
ECTS Credits	**7**			
SWL (hr/sem)	**175**			
Module Level	UG	**Semester of Delivery**		1
Administering Department	**Food science**	**College**		**College of Agriculture**
Module Leader		**e-mail**		**E-mail:**
Module Leader's Acad. Title		**Module Leader's Qualification**		**Ph.D.**
Module Tutor	Saba Muhammad Jaafar Faleh rasha naji abd	**e-mail**		Rashanaji@uomisan.edu.iq
Peer Reviewer Name	Name	**e-mail**		E-mail
Scientific Committee Approval Date	01/10/2024	**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 أهداف المادة الدراسية	Enables the student to gain knowledge: 1. The importance of the science of the principles of animal production, which deals in detail with the economic importance of livestock and types of global and local livestock, and their management and care. 2. Studying the types and importance of other farm animals such as buffaloes, sheep and goats, and their management and care.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Familiarity with general information about animal production and its economic and nutritional importance. 2. Discuss the factors affecting production efficiency and how to improve it. 3. Explain and clarify the obstacles facing livestock and ways to improve it. 4. Introducing students to livestock, their types, and how to care for them. 5. Introducing students to dual-purpose cattle and local and international sheep and goat breeds. 6. Defining how to establish and care for a flock of sheep and goats. 7. Defining the specifications of global and local buffalo and their different breeds. 8. We are introducing students to the importance of poultry projects and meat

	and egg production. 9. Providing an overview of Farm animals feed materials and the process for preparing balanced nutritional rations. 10. Explanation and clarification of health programs for animals, how to prevent diseases and ways to improve the health of animals and increase their productivity. 11. A detailed explanation of the importance of raising calves and heifers and providing the necessary needs for their rearing. 12. A detailed description of the reproductive system of cows and a statement of its importance in the reproductive process, and how to increase the reproductive efficiency of the animal and increase the birth rate. 13. Explain animal breeding and improvement programs and discuss the importance of breeding, selection, and exclusion of weak animals. 14. A detailed explanation of the importance of camels and the equine species and how to manage and care for them.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. 1. Disseminating the culture of livestock's nutritional and economic importance as a major source of agricultural wealth and having a major role in the Country's economy. 2. Following modern methods and techniques in animal management, milking operations, and large animal slaughterhouses. 3. Teaching students the role of successful management (human factor or the breeder himself) of small and large ruminant fields. 4. Spreading the culture of benefiting from animal by-products such as manure waste and animal waste, and benefiting from animals in work. 5. Identifying the types of farm animals and the most important projects related to their breeding. 6. Solving administrative problems in cattle, sheep, and goat breeding fields.

Learning and Teaching Strategies	
Strategies	1. Enabling students to think and analyze topics related to the intellectual framework of the Principles of Animal Production subject 2. Enabling students to think and analyze topics related to animal species and the most important projects related to their breeding. 3. Enabling students to think and analyze topics related to identifying administrative problems in animal fields and working to address them. 4. Enabling students to think and analyze to identify the role of management (the role of the human factor or the breeder himself) in the success of animal fields of various types.

Student Workload (SWL)			
Structured SWL (h/sem)	48	**Structured SWL (h/w)**	5
Unstructured SWL (h/sem)	127	**Unstructured SWL (h/w)**	3

Total SWL (h/sem)	175

Module Evaluation

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

Delivery Plan (Weekly Syllabus)

	Material Covered
Week 1	A general introduction to animal production and its importance.
Week 2	Factors affecting the production efficiency of farm animals.
Week 3	Obstacles facing animal production in Iraq and ways to improve them.
Week 4	Cattle classification - global dairy cows - management and care.
Week 5	Dual-purpose cows - Iraqi cows - International breeds of sheep and goats. First Exam.
Week 6	Establishing and managing a flock of sheep and goats.
Week 7	Buffalo - general characteristics of buffalo - physiological characteristics - breeds of buffalo.
Week 8	Poultry birds - the economic importance of poultry projects- the production of eggs and meat.
Week 9	Nutrition and feed- Preparing animal feed.
Week 10	Health care for agricultural animals. Second Exam.

Week 11	The importance of raising calves and heifers in cow fields.
Week 12	The physiology of reproduction and artificial insemination.
Week 13	Genetic improvement in poultry. Third Exam.
Week 14	Other agricultural animals - camels - their management and care.
Week 15	Other Farm Animals - Horses - Fish - Their Management and Care.
Week 16	End of Semester Exam.

Delivery Plan (Weekly Lab. Syllabus)

	Material Covered
Week 1	Lab 1: Visit the animal field (cow and sheep fields).
Week 2	Lab 2: Joint field operations for cows and sheep.
Week 3	Lab 3: Milking cows, learning about the lactation system of cattle and the automatic milking device.
Week 4	Lab 4: Suckling young calves.
Week 5	Lab 5: Learning about animal records.
Week 6	Lab 6: Scientific trip to one of the livestock projects.
Week 7	Lab 7: Methods of collecting semen and artificial insemination.
Week 8	Lab 8: Feed materials and feed composition.
Week 9	Lab 9: Animal housing.
Week 10	Lab 10: Parasite control and treatment.

Learning and Teaching Resources

	Text	**Available in the Library?**

Required Texts	Principles of Animal Production, written by Dr. Muzaffar Nafie Al-Sayegh - Dr. Taha Jassem Al-Taha - Dr. Suhaib Saeed Alwan Al-Zubaidi (1987).	Yes
Recommended Texts	Basics of animal production, written by A. Dr.. Ahmed Suleiman Mahmoud and A. Dr.. Mahmoud Riyad Al Mahdi (2013).	No
Websites	https://nicehatchincubators.com/the-principles-of-poultry-husbandry/	

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

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

---

second semester

MODULE DESCRIPTION FORM

Module Information		
Module Title	**Computer**	**Module Delivery**

Module Type	**Basic**	☒**Theory** ☒**Lecture** ☐**Lab** ☐**Tutorial** ☐**Practical** ☐**Seminar**
Module Code	**UOM 122**	
ECTS Credits	**3**	
SWL (hr/sem)	**75**	

Module Level	UG	**Semester of Delivery**	2
Administering Department	**Food Sciences**	**College**	**Agriculture**
Module Leader		**e-mail**	E-mail:
Module Leader's Acad. Title	Asst. Lecturer	**Module Leader's Qualification**	Follow up and practice scientific computer applications and update them
Module Tutor	Abbas luaibi obaid	**e-mail**	abbas.alrajhe@uomisan.edu.iq
Peer Reviewer Name	Name	**e-mail**	E-mail
Scientific Committee Approval Date	01/10/2024	**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 أهداف المادة الدراسية	**The computer has entered all scientific, applied and academic fields, and it has become necessary to learn how to deal with and manage the computer to reach the goal that the user seeks to achieve by referring to the important basics in the computer and addressing the most important steps that make the work more accurate.**
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	**1. Understand the roles of the Start Menu, Taskbar, Desktop, and File Explorer.** **2. Create, organize, rename, and delete files and folders effectively.** **3. Adjust personalization options, including desktop backgrounds, themes, and user account configurations.** **5. Use Windows 10 security features** **6. Utilize Task Manager, Disk Cleanup, and System Restore to maintain system performance.** **7. Optimize system performance: Use virtual desktops, manage startup programs, and optimize settings for efficient operation.**

Indicative Contents المحتويات الإرشادية	**Indicative content includes the following.** **Part A - .** 1. **Computer Fundamentals** [SSWL = 6 hrs] 2. **Computer Basics** [SSWL = 6 hrs] 3. **Inside the Computer** [SSWL = 6 hrs] 4. **Peripheral Devices and Connectivity** [SSWL = 6 hrs] **Part B –** 5. **Operating Systems Software [SSWL = 6 hrs]** 6. **Windows XP operation [SSWL = 6 hrs]** 7. **Folder formation, folder delete [SSWL = 6 hrs]** 8. **Menu lists, Window lists, Icons bar [SSWL = 6 hrs]** 9. **Control Panrl, Task Bar [SSWL = 6 hrs]** 10. **Start list [SSWL = 6 hrs]** **Part C–** 11. **Keybord, Windows XP** [SSWL = 6 hrs] 12. **Windows XP hiden files** [SSWL = 6 hrs] 13. **Paint program, Burning CD** [SSWL = 6 hrs] 14. **Fire Wall, Last version of Widdows XP** [SSWL = 6 hrs] 15. **Fire Wall, Last version of Widdows XP** [SSWL = 6 hrs] 16. **Revision and Preparatory Week for Final Exam** ○ Review of key concepts and practical exercises ○ Practice exams and Q&A sessions [SSWL = 6 hrs] **Total hours** = 105 (SSWL - Self-Study and Lecture hours)

Learning and Teaching Strategies

Strategies	**The learning strategy for this model is focused on encouraging students to become familiar with computer hardware components, operating systems, and essential software. This approach will provide participants with a solid scientific foundation in the field of computing, which they will be able to practically apply in their studies within the agricultural sciences field. This will be achieved through classes, interactive tutorials and by considering types of simple experiments involving some sampling activities that are interesting to the students.**

Student Workload (SWL)

Structured SWL (h/sem)	48	**Structured SWL (h/w)**	1

Unstructured SWL (h/sem)	27	**Unstructured SWL (h/w)**	1
Total SWL (h/sem)	**75**		

Module Evaluation

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

Delivery Plan (Weekly Syllabus)

	Material Covered
Week 1	**Introduction to Computers** • Definition and purpose of computers • History and evolution of computers • Types of computers (desktop, laptop, tablet, etc.)
Week 2	**Computer Hardware Basics** • Understanding computer hardware components • Overview of the CPU, motherboard, RAM, and storage devices • Introduction to input and output devices
Week 3	**Inside the Computer** • Detailed exploration of the internal components • How different parts work together (CPU, RAM, hard drive) • Basic troubleshooting and hardware maintenance
Week 4	**Peripheral Devices and Connectivity** • Common peripheral devices (mouse, keyboard, printer, etc.) • Introduction to ports and connectors (USB, HDMI, etc.) • How to set up and connect peripherals

Week 5	**Operating Systems Software** ● Development of Information Network Systems ● E-mail ● Internet ● Computers in Our Daily Life ● Insurance, Copyright and Law
Week 6	- Windows XP operation ● Working with menus and icons ● Main entrances to the icon system ● Windows Explorer ● Control Panel ● Shutdown ● Window control
Week 7	**Folder formation, folder delete** ● How to create or create a folder ● Delete folders ● Right-click menu for folders and files
Week 8	Menu lists, Window lists, Icons bar ● Explanation of menus ● Explanation of window components ● Button bar or components
Week 9	**Control Panrl, Task Bar** ● Control Panel ● Taskbar Right-Click Menu
Week 10	**File Management in Windows 10** ● Taskbar Properties ● Start Menu View
Week 11	**Keybord, Windows XP** ● Definition of extensions and their benefits ● Uses of some keyboard keys in Windows operating system XP
Week 12	**Windows XP hiden files** ● Hidden Programs in Windows XP ● WordPad
Week 13	**Paint program, Burning CD** ● Drawing application ● Methods for running discs in Windows XP without installation ● Special programs for burning CD
Week 14	**FAT32 of Windows xp** ● What is the recommended file system to use in Windows XP FAT32 OR NTFS ● How to improve the appearance of screen lines when using flat panel LCD displays or

	laptop computers Dynamic disk
Week 15	**Fire Wall, Last version of Widdows XP** • Windows XP Startup Options • What is Windows Firewall and how to activate it
Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly Lab. Syllabus)	
	Material Covered
Week 1	**Introduction to Windows 10 Interface** • Explore the Start Menu, Taskbar, and Desktop. • Practice opening, closing, and organizing windows. • Customize the Start Menu and Taskbar. • Use the search function to locate apps and settings.
Week 2	**Basic File Management** • Navigate File Explorer and its main components. • Create, rename, move, and delete files and folders. • Use keyboard shortcuts for file operations (copy, cut, paste, undo). • Understand file properties and extensions.
Week 3	**Personalization and System Settings** • Change desktop backgrounds, themes, and screen savers. • Configure Taskbar and notification area icons. • Manage user accounts (create, modify, delete). • Adjust basic system settings: display, sound, notifications.
Week 4	**Networking and Internet Basics** • Connect to Wi-Fi and Ethernet networks. • Troubleshoot common network connectivity issues. • Use Microsoft Edge for browsing, bookmarking, and managing history. • Learn basic internet safety and security tips.
Week 5	**Security and Antivirus** • Access and navigate Windows Security settings. • Use Windows Defender for scans and threat management. • Configure basic Windows Firewall settings. • Manage user account control (UAC) for added protection.
Week 6	**Maintenance and Troubleshooting** • Monitor system performance using Task Manager. • End unresponsive tasks and manage startup programs. • Perform basic system maintenance (Disk Cleanup, System Restore). • Explore Control Panel for advanced settings.

Week 7	**Advanced Features and Optimization** • Use virtual desktops for multitasking. • Introduction to Windows PowerShell commands. • Customize and use built-in Windows apps (e.g., Calendar, Mail). • Tips for optimizing system performance.

Learning and Teaching Resources

	Text	Available in the Library?
Required Texts	الربيعي، خالد عبد الوهاب. .(2020) مدخل إلى علوم الحاسوب. بغداد: دار الثقافة والنشر حسن، علي عبد الله. .(2016) مقدمة في الحاسوب ونظم التشغيل. بغداد: دار الجامعات العراقية. السامرائي، سعد عبد القادر. .(2014) أساسيات الحاسوب ونظام التشغيل. بغداد: دار الكتب والوثائق	Yes
Recommended Texts		No
Websites	https://www.rwaq.org http://www.cprogramming.comebooks.com/12082-free-book	

Grading Scheme

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

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

automatic rounding outlined above.

MODULE DESCRIPTION FORM

Module Information

Module Title	**Food industry principles**			**Module Delivery**
Module Type	**B**			☒ **Theory** ☐ **Lecture** ☒ **Lab** ☒ **Tutorial** ☐ **Practical** ☐ **Seminar**
Module Code	**FOIN131**			
ECTS Credits	**7**			
SWL (hr/sem)	175			
Module Level	**UGI**	**Semester of Delivery**		
Administering Department	**Food Science**	**College**	**College of Agriculture**	
Module Leader	**Dr. Mustafa Adnan Idan + Dr. Anwar Yaser Hussien + Inaam Abdulredha**	**e-mail**	**mustafa.adnan@uomisan.edu.iq**	
Module Leader's Acad. Title	**Lecturer**	**Module Leader's Qualification**	**Ph.D.**	
Module Tutor		**e-mail**		
Peer Reviewer Name		**e-mail**		
Scientific Committee Approval Date	10/10/2024	**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	● The student's knowledge of the practical foundations of the Principles of Basic

أهداف المادة الدراسية	Industries subject ● The extent to which the subject is related to daily life and how to deal with it ● Knowledge of manufacturing methods and the most common mistakes in the process of selecting the raw material ● Knowledge of how to produce food products within the standard specifications for product quality
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	Students will learn: 1. Preparing solutions and measuring methods 2. Methods of preserving processed food materials 3. Preparing the student to work in various food industries
Indicative Contents المحتويات الإرشادية	It is necessary to know the appropriate conditions for laboratory work related to food manufacturing, as well as to know the healthy methods for manufacturing different foods and methods for preserving them, in addition to knowing the methods for preparing sugar and salt solutions and methods for measuring them.

Learning and Teaching Strategies

Strategies	The main strategy for delivering this unit is to encourage and prepare students for work in the food market and laboratories while refining and expanding their work skills. This will be achieved through classroom, interactive lessons and simple laboratory experiments.

Student Workload (SWL)

Structured SWL (h/sem)	64	**Structured SWL (h/w)**	4
Unstructured SWL (h/sem)	61	**Unstructured SWL (h/w)**	4
Total SWL (h/sem)	**125**		

Module Evaluation

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative	**Quizzes**	2	10% (10)	5 and 10	LO #1, #2 and #7, #6

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

Delivery Plan (Weekly Syllabus)

	Material Covered
Week 1	Preparation of solutions and measurement methods
Week 2	Manufacture of cheese and tomato paste
Week 3	Manufacture of jams and jelly
Week 4	Four lectures
Week 5	Manufacture of juices and drinks
Week 6	Manufacture of molasses
Week 7	Manufacture of pickles
Week 8	Quiz 1
Week 9	Three lectures exam
Week 10	Manufacture of bread and bread
Week 11	Manufacture of pastries
Week 12	Manufacture of birquier
Week 13	Three lectures exam
Week 14	Preservation methods
Week 15	Drying, freezing and cooling process

Week 16	Quiz 2

Delivery Plan (Weekly Lab. Syllabus)	
	Material Covered
Week 1	Methods of measuring the concentration of sugar and salt solutions
Week 2	Bread industry
Week 3	Pickle industry
Week 4	Molasses industry
Week 5	Jam industry
Week 6	Ketchup and tomato paste industry
Week 7	Preservation methods

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts	**[1] Basic principles of industries** **[2] Food chemistry** **[3] Manufacturing process chain**	yes
Recommended Texts		
Websites		

Grading Scheme				
Group	**Grade**	التقدير	**Marks %**	**Definition**
Success Group (50 - 100)	**A -** Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors

	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group	**FX –** Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
(0 – 49)	**F –** Fail	راسب	(0-44)	Considerable amount of work required

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

Course Description Form

Module Information

Module Title	**Organic Chemistry**		**Module Delivery**	
Module Type	**Basic**		☒ **Theory** ☐**Lecture** ☒ **Lab** ☐ **Tutorial** ☐**Practical** ☐ ☒**Seminar**	
Module Code	**ORCH125**			
ECTS Credits	**7**			
SWL (hr/sem)	**175**			
Module Level	1		**Semester of Delivery**	2
Administering Department	**Food science**		**College**	Agriculture college
Module Leader			**e-mail**	
Module Leader's Acad. Title	LECTURER		**Module Leader's Qualification**	PhD
Module Tutor	Dr. Azalldeen kazalAlzubaidi Asaad shameel Atiya		**e-mail**	asaad.shameel@uomisan.edu.iq ez_aldeen@uomisan.edu.iq
Peer Reviewer Name	Name		**e-mail**	E-mail
Scientific Committee Approval Date	01/10/2024		**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 أهداف المادة الدراسية	The curriculum included a general study of the organic chemistry of some of its formulations, including aliphatic compounds, their preparation methods, their most important reactions and their naming, as well as aromatic compounds and their derivatives and their nomenclature, halogen organic compounds, oxygen organic compounds, nitrogen compounds, and stereochemistry.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	The organic chemistry curriculum is one of a series of important curricula in the Department of Food Sciences as a guide for students about the most important principles of organic chemistry, explaining the properties of chemicals and how to prepare them and reveal their presence to help know the dangers of these materials to humans and their environment and how to avoid these risks and to know the areas in which they can be used this Materials
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. **Keeping abreast of the amazing developments taking place in various fields and sciences, especially organic chemistry, by clarifying the theoretical foundations and scientific and applied courses of the organic chemistry course through a detailed study of the composition, naming and preparation of chemicals and the chemical reactions explained by their mechanics.**

Learning and Teaching Strategies

Strategies	The modern teaching strategy includes achieving learning objectives in general and teaching chemical concepts in particular, and the difficulties that the student faces in understanding and acquiring the concepts of organic chemistry, and treating the difficulties by defining the concepts of organic chemistry and helping students acquire the correct chemical concepts.

Student Workload (SWL)

Structured SWL (h/sem)	78	**Structured SWL (h/w)**	5
Unstructured SWL (h/sem)	97	**Unstructured SWL (h/w)**	5
Total SWL (h/sem)			**175**

Module Evaluation

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

Delivery Plan (Weekly Syllabus)

	Material Covered
Week 1	**Introduction to organic chemistry - the most important bonds - hybridization - the probabilities of C-C covalent bond cleavage - the most important reactions in organic chemistry**
Week 2	**Alkanes - Definition - Nomenclature - Examples - Sp3 hybridization - Rotational motion - Preparation - Reactions**
Week 3	**Alkenes - Definition - Nomenclature - Examples - Sp2 hybridization - Double bond formation - Preparation - Reactions**
Week 4	**Hydrocarbon compounds that contain more than one double bond - examples - dienes - their types - their reactions**
Week 5	**Alkynes - Definition - Nomenclature - Examples - Sp hybridization - Formation of the triple bond - Preparation - Reactions**
Week 6	**Aliphatic cyclic compounds - definition - most important rings - preparation - most important reactions**

Week 7	**First theoretical exam**
Week 8	**Aromatic compounds - definition - nomenclature - electron swing energy calculation - aromatic ring formation - activity and orientation - preparation - reactions**
Week 9	**Aliphatic and aromatic halides - definition - nomenclature - examples - preparation - reactions SN1, SN2, E1, E2-**
Week 10	**Nucleophilic substitution in aryl halides**
Week 11	**Alcohols, phenols and ethers - definition, nomenclature, preparation, reactions**
Week 12	**Aldehydes and ketones - definition - examples - nomenclature - carbonyl group - preparation - reactions - nitrogen derivatives of aldehydes and ketones**
Week 13	**Second theoretical exam**
Week 14	**Amines - definition - types - nomenclature - examples - preparation - reactions**
Week 15	**Carboxylic acids - definition - examples - nomenclature - carboxyl group - preparation - reactions**
Week 16	**We are usually unable to deal with carboxylic acid derivatives (esters, anhydrides, amides, acid halides) due to the time constraints compared to the previous one.**

Delivery Plan (Weekly Lab. Syllabus)	
	Material Covered
Week 1	Lab 1: Physical properties of organic materials
Week 2	Lab 2: Boiling Point Measurement
Week 3	Lab 3: Purification of organic matter and recrystallization
Week 4	Lab 4: solubility of organic compounds
Week 5	Lab 5: Effective totals
Week 6	Lab 6: Detecting the double bond
Week 7	Lab 7: Stereoisomers
Week8	Lab8: Detection of alcohols and phenols
Week9	Lab9: NS

Week10	Lab10: Detecting aldehydes and ketones and distinguishing between them
Week11	Lab11: Aspirin preparation
Week12	Lab12: Methane
Week13	Lab13: Physical properties of organic materials

Learning and Teaching Resources

	Text	Available in the Library?
Required Texts	**Osman, Ibrahim Mohamed (2005). Organic Chemistry: Concepts and Applications. Dar Al-Amal for Publishing and Distribution**	NO
Recommended Texts	**Mazahreh, Ayman Mokhtar (2017). Basics of organic chemistry and its applications. Curriculum House for Publishing and Distribution**	No
Websites	Scientific Researcher and Scientific Journals	

Grading Scheme

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

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

automatic rounding outlined above.

MODULE DESCRIPTION FORM

Module Information
معلومات المادة الدراسية

Module Title	**General Arabic**	**Module Delivery**	
Module Type	**Core**	☐ **Theory** ☒ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code			
ECTS Credits			
SWL (hr/sem)			
Module Level		**Semester of Delivery**	
Administering Department	**Food science**	**College**	**College of Agriculture**
Module Leader	**Jihad Naeem Aliwi**	**e-mail**	**jehaad.naeem@uomisan.edu.iq**
Module Leader's Acad. Title	**Assistant Lecturer**	**Module Leader's Qualification**	**MS.C**
Module Tutor	**N.A**	**e-mail**	**N.A**
Peer Reviewer Name	**N.A**	**e-mail**	**N.A**
Scientific Committee Approval Date	/ /2025	**Version Number**	

Relation with other Modules

Relation with other Modules
العلاقة مع المواد الدراسية الأخرى

Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	**Introducing students to the basic rules of the Arabic language and enhancing their ability to write correctly, with a focus on training them to prepare scientific research free of linguistic errors.**
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	**Students will learn:** **Grammar of the Arabic language, Arabic literature, spelling rules, the Holy Quran.**
Indicative Contents المحتويات الإرشادية	

Learning and Teaching Strategies:

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

Student Workload (SWL):

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

Module Evaluation:

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	10% (10)	6 and 13	LO #1, #2 and #8, #9
	Assignments	2	10% (10)	5 and 11	LO #5, #6 and #9, #10
	Projects / Lab.				
	Report	2	10% (10)	11	LO #5, #6 and #7, #8
Summative assessment	**Midterm Exam**	2hr	20% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري

	Material Covered
Week 1	**The subject and the predicate**
Week 2	**The subject and the deputy subject**
Week 3	**The name of Kahn and her sisters**
Week 4	**News that and her sisters**
Week 5	**Literary life in the era of early Islam (features and characteristics)**
Week 6	**The Farewell Pilgrimage Sermon of the Holy Prophet Muhammad (PBUH)**
Week 7	**The poem Burdah by Ka'b ibn Zuhayr (his life and critical commentary)**
Week 8	Literary life in the Umayyad era
Week 9	Poetry of contradictions
Week 10	**Jarir and Al-Farazdaq (his life and critical commentary)**
Week 11	**The alphabetical, phonetic and alphabetical order of the Arabic letters**
Week 12	**Solar and lunar letters**
Week 13	**Writing the marbuta ta' and the simple ta'**
Week 14	
Week 15	
Week 16	

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

Week 1	
Week 2	
Week 3	

Week 4	
Week 5	
Week 6	

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	*	
Recommended Texts		
Websites		

Grading Scheme

مخطط الدرجات

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

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

Course Description Form

Module Information
معلومات المادة الدراسية

Module Title	**Principles of dairy science**	**Module Delivery**	
Module Type	**Core**	☒ **Theory** ☐ **Lecture** ☒ **Lab** ☐ **Tutorial** ☒ **Practical** ☐ **Seminar**	
Module Code	**DAIR140**		
ECTS Credits	**6**		
SWL (hr/sem)	**150**		
Module Level	1	**Semester of Delivery**	**2semester**
Administering Department	**Food sciences**	**College**	**Agriculture**
Module Leader	**LECTUER**	**e-mail**	
Module Leader's Acad. Title		**Module Leader's Qualification**	
Module Tutor	Dr. Abdulridha Ati Jaafar Dr.Sadeq Fenjan Hasnawi	**e-mail**	84@uomisan.edu.iqridha
Peer Reviewer Name		**e-mail**	Sadiq.fanjan@uomisan.edu.iq
Scientific Committee Approval Date	01/10/2024	**Version Number**	

Relation with other Modules
العلاقة مع المواد الدراسية الأخرى

Prerequisite module	Dairy Chemistry	**Semester**	4
Prerequisite module	Food Industries	**Semester**	2
Prerequisite module	Food Chemistry	**Semester**	7
Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	1. Introducing students to the components of milk and the high nutritional value that makes it an important product from a nutritional, health and economic perspective 2. Developing students' theoretical and practical skills that enable them to detect milk fraud 3. Developing students' milk manufacturing skills such as making cheese, fermented milk, butter, skimmed milk, yogurt ice cream, etc. 4. Teaching students how to protect milk from contamination with pathogenic microorganisms
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	Students will learn: 4. Enabling students to conduct tests on milk components . 5. Introducing students to the chemical components of milk . 6. Introducing students to the most important factors affecting milk production . 7. Introducing students to milk proteins 8. Introducing students to fats and fatty acids in milk 9. Introducing students to how to estimate the concentration in milk 10. Introducing students to how to detect milk adulteration 11. Introducing students to the most important salts and vitamins found in milk 12. Introducing students to methods of sorting milk and factors affecting the greenness 13. Introducing students to milk microbiology 14. Introducing students to methods of cheese manufacturing 15. Teaching students to make ice cream 16. Introducing students to quality control of milk 17. Introducing students to dairy laboratories 18. Introducing students to thermal treatments of milk
Indicative Contents المحتويات الإرشادية	1. Student contact time refers to the professor-mediated time allocated to teaching, provision of guidance, and feedback to students. 2. This time includes activities that take place in face-to-face contexts such as lectures, seminars, demonstrations, tutorials, supervised laboratory workshops, practical classes, project supervision as well as where the professor is available for one-to-one discussions and interaction by email. 3. Student contact time also includes professor-mediated activities that take place in online environments, which may be synchronous (using real-time digital tools such as Zoom or Blackboard Collaborate Ultra) or asynchronous (using digital tools such as tutor-moderated discussion forums or blogs often delivered through the School's virtual learning environment, Moodle).

Learning and Teaching Strategies	
Strategies	1- Lectures and tutorials provide background information using pictures and illustrations that facilitate the student's understanding of the material. 2- Training students to conduct laboratory tests on dairy products in a way that develops students' skills in this field.

	3- Conducting discussions and dialogues with students, which in turn enhances the student's self-confidence.

Student Workload (SWL)

Structured SWL (h/sem)	78	**Structured SWL (h/w)**	5
Unstructured SWL (h/sem)	72	**Unstructured SWL (h/w)**	4.8
Total SWL (h/sem)	**150**		

Module Evaluation

As		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	**Quizzes**	2	20% (20)	5 and 10	
	Assignments	1	10% (10)	continuous	
	Projects / Lab.				
	Report	1	10% (10)	12	
Summative assessment	**Midterm Exam**	2hr		7	LO #2-#7
	Final Exam	3hr	50%(50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

Week	Material Covered
Week 1	Milk components
Week 2	Chemical composition of milk
Week 3	Factors affecting milk production
Week 4	Milk proteins

Week 5	Milk fat
Week 6	Milk acidity
Week 7	Specific gravity of milk
Week 8	Milk salts and vitamins
Week 9	Factors affecting milking
Week 10	Milk microorganisms
Week 11	Cheese making
Week 12	Ice cream making
Week 13	Quality control of milk received
Week 14	Milk treatment in dairy factories
Week 15	Heat treatments of milk
Week 16	Milk components

Delivery Plan (Weekly Practical Syllabus) المنهاج الاسبوعي للمختبر	
Week	**Material Covered**
Week 1	Milk components testing
Week 2	Milk chemical composition tests
Week 3	Factors affecting milk production
Week 4	Milk protein tests
Week 5	Microscopic fat tests and fat percentage estimation (Babcock and Kerber)
Week 6	Acidity estimation in milk
Week 7	Specific gravity tests and milk adulteration
Week 8	Milk salts and vitamins

Week 9	Milk sorting and butter making
Week 10	Milk microbiology tests
Week 11	Cheese making
Week 12	Ice cream making
Week 13	Quality control of received milk
Week 14	Milk treatment in dairy factories
Week 15	Milk thermal treatments

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	**كتاب مبادئ االلبان العامة تاليف د. محسن الشبيبي ودكتور نزار شكري والدكتور صادق جواد طعمة والدكتور هيالن حمادي علي 1999**	yes
Recommended Texts	**مبادئ الالبان العامة جمال عبد التواب** **مبادىء الالبان رمزي عبد الرحمن** **كتاب مبادئ االلبان تالف دكتور محسن الشبّيبئ واخورن**	Yes
Websites	https://www.scribd.com/document/491738379	

نموذج وصف المادة الدراسية

معلومات المادة الدراسية				
Module Title	**Engineering workshops**		**Module Delivery**	
Module Type	Basic		☒ **Theory**	
Module Code	**ENWK113**		☐**Lecture**	
ECTS Credits	**6**		☐ **Lab**	
SWL (hr/sem)	150		☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Level	1	**Semester of Delivery**	2	
Administering Department	**FOOD SCIENCES**	**College**	Agriculture	

Module Leader	Ali Abbas Hashim		**e-mail**	ali_abbas@uomisan.edu.iq	
Module Leader's Acad. Title	**assistant professor**		**Module Leader's Qualification**	Ph.D	
Module Tutor	Ali Abbas Hashim		**e-mail**	ali_abbas@uomisan.edu.iq	
Peer Reviewer Name			**e-mail**		
Scientific Committee Approval Date			**Version Number**		

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents

Module Objectives أهداف المادة الدراسية	It is essential to understand the engineering foundations of dimensions and units due to the many dimensional terms and unit systems. Ultimately, it is important to be able to convert between different units while operating and monitoring food processing equipment.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	Important: Write at least six learning outcomes, ideally equal to the number of weeks of study. 1. Identify the physics of food laboratories and engineering. 2. List the various terms associated with electrical circuits. 3. Summarize the meaning of motion, its types, and Newton's laws. 4. Discuss the fact that the student is a resident engineer and has ventilation problems. 5. Describe electrical power, charge, and current intensity. 6. Define Ohm's Law. 7. Identify basic pumps and their applications. 8. Discuss fluid transport processes in pipes. 9. Discuss the operation of refrigerated warehouses.

Indicative Contents المحتويات الإرشادية	

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	Write something like: The main strategy that will be adopted in delivering this unit is to encourage student participation in exercises, while simultaneously improving and expanding their critical thinking skills. This will be achieved through interactive classes and tutorials, and by considering simple experiments that involve some sampling activities that interest students.

Student Workload (SWL)

Structured SWL (h/sem)	78	**Structured SWL (h/w)**	5
Unstructured SWL (h/sem)	72	**Unstructured SWL (h/w)**	4.8
Total SWL (h/sem)	**150**		

Module Evaluation

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	**Quizzes**	2	20% (20)	5 and 10	
	Assignments	1	10% (10)	continuous	
	Projects / Lab.				
	Report	1	10% (10)	12	
Summative assessment	**Midterm Exam**	2hr		7	LO #2-#7
	Final Exam	3hr	50%(50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	Introduction - The importance of introducing students to the basics of engineering workshops and the practical workshop.
Week 2	Dimensions and Units
Week 3	Motion and its Types, Part One
Week 4	Motion and its Types, Part Two
Week 5	Means of Motion Transmission
Week 6	Requirements for Food Laboratories
Week 7	Food Laboratories Ventilation
Week 8	Pumps and their Types, Part One
Week 9	Pumps and their Types, Part Two
Week 10	Supercritical Fluids
Week 11	Fluid Flow
Week 12	Main Electricity
Week 13	Food Storage
Week 14	Requirements for Food Laboratories
Week 15	Preparatory Week Before the Final Exam

Delivery Plan (Weekly Practical Syllabus)	
	Material Covered
Week 1	Lab 1: Applications of Newton's Laws of Motion
Week 2	Lab 2: Enter the pilot lab and have students use the propulsion devices inside it
Week 3	Lab 3: Learn about the different methods of laboratory ventilation
Week 4	Lab 4: Learn about the operation of different pumps and their importance in laboratories
Week 5	Lab 5: Learn about and work on electrical circuits and their installations
Week 6	Lab 6: Conduct experiments on food preservation and the introduction of mechanization

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts	Fundamentals of Electrical Circuits, C.K. Alexander and M.N.O. Sadiku, McGraw-Hill Education	Yes
Recommended Texts	Engineering Workshop Manual, authored by Prof. Dr. Asad Rahman Saeed and Asst. Prof. Dr. Hassan Hadi Mahdi	Yes
Websites	-engineering/electrical-and-science-https://www.coursera.org/browse/physical engineering	

Grading Scheme

مخطط الدرجات

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

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

First semester

Course Description Form

1. Course Name: Design and Analysis of Experiments					
2. Course Code: DAAE319					
3. Semester / Year: Semester-based – First Course					
4. Description Preparation Date: 1/10/2024					
5. Forms of Attendance: Weekly					
6. Number of Studying Hours (Total) / Number of Units (Total) 75 hours					
7. Course Administrator's Name (mention all, if more than one name)					
Name: Dr. Yahya Ajib Oudeh			Email: Yahya.ajjb@uomisan.edu.iq		
8. Course Objectives					
Course Objectives	Educate students on the fundamental principles of designing and analyzing experiments, emphasizing the importance of this subject in reinforcing the practical aspect of conducting scientific research. Students will learn about the main concepts of design such as experiments, experimental units, factors, treatments, replications, and experimental error, and how to choose the appropriate design for agricultural experiments to reach correct conclusions and decisions				
9. Teaching and Learning Strategies					
Strategies	The strategy is implemented through lectures, discussions, solving scientific and practical examples, daily and monthly exams, assignments, and brainstorming sessions.				
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2 Theory, 3 Practical	Design of Completely Randomized Block Design (R.B.C.D)	Design and Analysis of Experiments	Lectures and Discussions	Semester Exam, Daily Exam, Student Performance Evaluation, Homework
2	2 Theory, 3 Practical	Significant differences according to the Least Significant	Design and Analysis of Experiments	Lectures and Discussions	
3	2 Theory, 3 Practical	Estimation of missing data in R.B.C.D design	Design and Analysis of Experiments	Lectures and Discussions	
4	2 Theory,	R.B.C.D design with more than one	Design and Analysis of	Lectures and Discussions	

	3 Practical	observation	Experiments		Semester Exam, Daily Exam, Student Performance Evaluation, Homework
5	2 Theory, 3 Practical	Latin Square Design (L.S.D)	Design and Analysis of Experiments	Lectures and Discussions	
6	2 Theory, 3 Practical	Dunnett's Comparison Test	Design and Analysis of Experiments	Lectures and Discussions	
7	2 Theory, 3 Practical	Monthly Exam	Design and Analysis of Experiments	Lectures and Discussions	
8	2 Theory, 3 Practical	Types of complex experiments and how to distinguish between	Design and Analysis of Experiments	Lectures and Discussions	
9	2 Theory, 3 Practical	Factorial experiments with two factors in C.R.D design	Design and Analysis of Experiments	Lectures and Discussions	
10	2 Theory, 3 Practical	Factorial experiments in R.B.C.D design	Design and Analysis of Experiments	Lectures and Discussions	
11	2 Theory, 3 Practical	Factorial experiments in Latin Square Design	Design and Analysis of Experiments	Lectures and Discussions	
12	2 Theory, 3 Practical	Monthly Exam	Design and Analysis of Experiments	Lectures and Discussions	
13	2 Theory, 3 Practical	Split-plot experiments with two factors in C.R.D design	Design and Analysis of Experiments	Lectures and Discussions	
14	2 Theory, 3 Practical	Split-plot experiments with two factors in R.B.C.D design	Design and Analysis of Experiments	Lectures and Discussions	
15	2 Theory, 3 Practical	Split-plot experiments with two factors in Latin Square Design	Design and Analysis of Experiments	Lectures and Discussions	

11. Course Evaluation	
Distribution of the grade out of 50 according to the tasks assigned to the student, such as homework, .daily, oral, monthly, written exams, reports, etc	
12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	"Design and Analysis of Agricultural Experiments" by Dr. Khasha Mahmoud Al-Rawi.
Main references (sources)	From textbooks, supplementary books, the

	internet, and scientific research
Recommended books and references (scientific journals, reports...)	"Design and Analysis of Agricultural Experiments"
Electronic References, Websites	

MODULE DESCRIPTION FORM

Module Information معلومات المادة الدراسية				
Module Title	Computer applications/2		Module Delivery	
Module Type	Support		☒ Theory ☐ Lecture ☒ Lab ☐ Tutorial ☒ Practical ☐ Seminar	
Module Code	UM-212			
ECTS Credits	3			
SWL (hr/sem)	75			
Module Level	UG		Semester of Delivery	1
Administering Department			College	College of Agriculture
Module Leader	Abbas luaibi obaid		e-mail	abbas.alrajhe@uomisan.edu.iq
Module Leader's Acad. Title	Asst.Lecturer		Module Leader's Qualification	Msc.Engineering
Module Tutor	Abbas luaibi obaid		e-mail	abbas.alrajhe@uomisan.edu.iq
Peer Reviewer Name	Department of Animal Production		e-mail	mailto:Itdept.bmtc@stu.edu.iq
Scientific Committee Approval Date	29/09/2024		Version Number	1.0

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

Co-requisites module	None	Semester	
Module Objectives أهداف المادة الدراسية	1- Guiding the student how to use the computer in a manner compatible with his cultural level 2- Directing the student how to deal with social sites		
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	Students will learn: 1. The basics, basic ideas and concepts necessary to understand the structure of the computer. 2. Explain the basic components of the computer and learn about them in detail. 3. Explain computer security and explain malware and how to prevent it. 4. Understand how to deal with programs safely. 5. Explain operating systems and learn about them. 6. Explain how to deal with the Windows system and how to install it on computers. 7. Learn about keyboard shortcuts and how to use them.		
Indicative Contents المحتويات الإرشادية	Here's a detailed outline of indicative contents for an computer Basics course. The indicative contents typically cover the following key topics: 1. Computer Basics 1. The development of computer generations 2. Electronic computer 3. Data and information 4. Computer features 5. Areas of computer use 6. Computer components 7. Types of computers 8. Classification of computers 2. Computer components 1. Computer components 2. The physical parts of the computer 3. Input devices		

	4. Output devices 5. Computer box1.Software entity 6. Number systems 7. Your personal computer 8. Computer platform 9. Factors that must Take this into consideration when purchasing a computer 3.(Computer security and licensing programs) 1. Ethics of the electronic world 2. Forms of abuses in the world Electronic 3. Computer security 4. Computer privacy 5. Computer software licenses 6. Types of licenses 7. Intellectual property 8. Electronic hacking 9. Types of electronic hacking 10. Sources of hacking Electronic 11. The most security risks widespread 12. Malicious software 13. Computer viruses 14. Damages resulting from Viruses 15. Components of viruses 16. Types of viruses 17. Necessary steps for protection From viruses 18. Computer damage On human health 4.Operating Systems 1. Definition of the operating system 2. Operating system functions

	3. Objectives of the operating system 4. Operating system classification 5. Examples of some operating systems 6.Windows 7 operating system 7.Windows 7 installation requirements 8.Windows 7 features 9. Surface components

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	1- Explanation, clarification, and honing general and qualifying skills 2- Urging the student to write simple research using the lecture method to create a state of balance between methodological information and source information. 3- Urging the student to work on practical projects on the calculator and hold discussion circles among the students on the methodology of the subject and distribute the students into groups. 4-Practical lessons in the laboratory 5- The method of self-learning and writing scientific reports, and urging the student to evaluate the answers of his fellow students to develop self-development.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	48	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	3
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	27	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	1.8
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	75		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	To be selected by the module leader
	Class group assignments	1	5% (5)	Continuous	
	Report	1	10% (10)	12	
Summative assessment	Midterm Exam	1hr	25% (25)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
٧	Material Covered
Week 1	Chapter One: 1. Operating the Word program 2010 File Burning, 2. Program Interfaces 3.Tapes Home tab, group 4.Horizon, line and paragraph…
Week 2	5.Paragraph group and Order group 6.And the View tab, the Views group 7.Documents, Show group, and Zoom group 8.Minimize the window, help instructions

Week 3	Chapter Two / 1. Insert tab, Page group, 2.Table group, 3.Table Tools tab, ...4.Table Design tab, and Skip tab
Week 4	5.Graphics set, tools 6.Image, set of links 7.Header and footer group, 8.text group, and symbol group
Week 5	Chapter Three/Additional tasks For Microsoft Word, the References and Tables of Contents tab, the Footnotes group, the References, Citations and Captions group, and the Indexing group…. Resource table set, tbui b
Week 6	Correspondence and group creation, merging Correspondence A group of writing and inserting fields Preview results set Review, proofread and language tab And a comment group, a tracking group Changes set and comparison set And a protection group
Week 7	Mid-term Exam
Week 8	Chapter Four Powerpoint Run it The program interfaces and the File tab Open a presentation file and save a new one Save a stock presentation as Open and close an inventory presentation View and print slides on paper and the Home tab Page setup, theme and background set Slideshow tab h
Week 9	
Week 10	View tab and Views group Presentation and presentation set Main Show set and set Direction, color and grayscale Zoom in, zoom out and group Help window and instructions

	Chapter Five / Inserting and adding objects Motions, adding shapes and groups Drawing and investigating t
Week 11	
Week 12	Inserts tab and Tables group And a set of photos Collection of illustrations and links A set of text and symbols Adding animations to slides and objects The Transitions tab and the Preview group A group is transferred to a slide Set the timing and movements tab A preview group and an animation group
Week 13	
Week 14	Custom drivetrain and kit The timing is a comprehensive exam as a review and solution Book questions b
Week 15	
Week 16	Final examination

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Showing the components of the computer to the students and what the parts of the computer consist of in detail
Week 2	Introducing students to the input and output parts and explaining the operation of each device.
Week 3	Opening the computer case, explaining the internal parts and explaining the function of each part
Week 4	Show programming examples inside the lab using one of the programming languages to familiarize students
Week 5	Introducing students to personal computers, explaining their components and parts, how to choose them, and
Week 6	what are the most important factors to consider when purchasing a computer.

Week 7	Mid-term Exam
Week 8	Practical implementation of computer security, privacy protection and computer software licenses and identifying types of licenses, intellectual property statement, examples of hacking and types of hacking
Week 9	Practical implementation of Introducing students to the sources of hacking, its risks, the most important malware, and examples of it in the form of a presentation. Introducing students practically to computer viruses and the damages resulting from them, what are the types of viruses, and the most important steps necessary to protect against hacking
Week 10	Practical implementation of The harms of computers on human health, introducing students to using computers for prevention and , Introducing students to the operating system, what are the requirements for installing the operating system, and how to install the operating system.
Week 11	Practical implementation of Explain the components of the desktop, the Start menu, and the taskbar.
Week 12	Practical implementation of Folders and files. Explaining the types of files. Introducing the student to the main icons.
Week 13, 14	Practical implementation of Perform operations on windows, how to change the desktop,
Week 15	Practical implementation of To explain the control panel in detail, and to show the control button, and how to install programs
Week 16	Final examination

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Written by: 1- Professor Dr. Ghassan Hamid Abdel Majeed 2-Professor Dr. Ziad Muhammad Abboud 3-Professor Dr. Muhammad Nasser Al-Tarfi 4-Professor Dr. Safaa Abbas Al-Mamouri 2- International Information Network, the Internet 1- Internet Ethics - A. M. Alawi Hind - Al-Shabsi Arab University	yes

	Center 2- Ethics of dealing with technical and communication resources - Dr. Hussein bin Saeed bin Saif 3- Ethics of the virtual world - Dr. Louay Al-Zoubi 2013	
Websites	Library Genesis :websites History of the development of computer networks, objective website: - http://mawdoo3.com http://youstaff.blogspot.com: Information and Internet security - http://geeklesstech.com : Internet Law Laws for using the Internet Real-time communication protocols in the Internet (RTP SIP), World of - .Technology website .ARPANET logical map, http://russbellew.com/Documents/Arpanet_sep_1974	

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

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

Course Description Form

1. Course Name:	
Organic Chemistry	
2. Course Code:	
3. Semester / Year:	
The Second spring course / Second year	
4. Description Preparation Date:	
5. Forms of Attendance:	
Mandatory (Theoretical / Practical)	
6. Number of Studying Hours (Total) / Number of Units (Total)	
75 H	
7. Course Administrator's Name (mention all, if more than one name)	
Name: Anwaar Yasser	Email: anwaaryaser@uomisan.edu.iq
8. Course Objectives	
Course Objectives	Definition the student to Organic chemistry
9. Teaching and Learning Strategies	
Strategies	Theoretical lectures Use the Curriculum book Use the blackboard

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2 theoretical + 3 Practical	Definition the student to Organic chemistry,Properties of the element carbon,Types of chemical bonds	Introduction of Organic Chemistry	Using theoretical lectures and using the blackboard structures	Quiz

2	2 theoretical + 3 Practical	Definition the student to Hybridization	Introduction of Organic Chemistry	Using theoretical lectures and using the blackboard structures	Quiz
3	2 theoretical + 3 Practical	Definition the student to Alkanes , Name them , isomers, physical and chemical properties	Saturated Hydrocarbons 'AlKanes'	Using theoretical lectures and using the blackboard structures	Quiz
4	2 theoretical + 3 Practical	Preparation of alkanes, cycloalkanes	Saturated Hydrocarbons 'AlKanes'	Using theoretical lectures and using the blackboard structures	Quiz
5	2 theoretical + 3 Practical	Definition the student to Alkenes , Name them , isomers, physical and chemical properties	unSaturated Hydrocarbons 'AlKenes'	Using theoretical lectures and using the blackboard structures	Quiz
6	2 theoretical + 3 Practical	Preparation of alkenes	unSaturated Hydrocarbons 'AlKenes'	Using theoretical lectures and using the blackboard structures	Quiz
7	2 theoretical + 3 Practical	Definition the student to Dienes , name and preparation them	unSaturated Hydrocarbons 'AlKenes'	Using theoretical lectures and using the blackboard structures	Quiz
8	2 theoretical + 3 Practical	Definition the student to Alkynes , Name them , physical and chemical properties	unSaturated Hydrocarbons 'AlKynes'	Using theoretical lectures and using the blackboard structures	Quiz
9	2 theoretical + 3 Practical	Preparation of alkynes	unSaturated Hydrocarbons 'AlKynes'	Using theoretical lectures and using the blackboard structures	Quiz

10	2 theoretical + 3 Practical	Definition the student to Aromatic Comopounds , Name them , physical and chemical properties	Aromatic Comopounds	Using theoretical lectures and using the blackboard structures	Quiz

11. Course Evaluation
The theoretical part (30) marks: Written exam (25) marks + quiz exams (5) marks. Practical part (20) marks: The first month: a written exam (20 marks).

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Introduction of Organic Chemistry Dr. Fadel Suleiman Kammouna

Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Template

1- Course Title:
Principles of Microbiology
2- Course Code: DAIR240
DAIR240
3- Semester / Academic
Year: 2024 – 2025 (Fall Semester)
4 - Date of Course Description Preparation
1 – 10 – 2024—
5- Available Attendance Modes
In-Person
6- Total Study Hours / Total Units: 75
hours (2 Theory + 3 Practical) * 15 Weeks
7- Course Coordinator(s): (If more than one, mention all names

Name: Dr. Abdul Ridha Ati Jaafar Asaad Shamil Atiyah	Email: ridha84@uomisan.edu.iq

8. Course Objectives

● Introduce students to microbiology and its various species and types. ● Develop students' theoretical and practical skills to enable them to identify different types of microorganisms, whether harmful or beneficial. ● Enhance students' skills in various microbiological techniques and their applications in medical, industrial, and environmental fields.	Course Objectives

9. Teaching and Learning Strategies

1- Presenting course materials using images and illustrative diagrams that facilitate students' understanding of the subject. 2- Training students in microbiological culturing of microorganisms to develop their skills in this field. 3- Conducting discussions and dialogues with students to enhance their self-confidence.	Strategy

10. Course Structure

Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week

Daily and Monthly Reports and Exams	Theoretical Lectures Practical Lectures Presentation Methods Discussion and Dialogue	A historical overview of microbiology and the scientists who contributed to its .development	Introducing students to microbiology and the most prominent scientists who significantly contributed to its development .throughout history	5	First
Daily and Monthly Reports and Exams	Theoretical Lectures Practical Lectures Presentation Methods Discussion and Dialogue	Bacteria (Morphological traits and functional anatomy Fungi (Molds and (Yeasts	Introducing students to bacteria and fungi, and the most important shapes, genera, and species .within them	5	second
Daily and Monthly Reports and Exams	Theoretical Lectures Practical Lectures Presentation Methods Discussion and Dialogue	Algae Viruses	Introducing students to algae and viruses, their way of life, .and reproduction	5	Third

Daily and Monthly Reports and Exams	Theoretical Lectures Practical Lectures Presentation Methods Discussion and Dialogue	Pathogenic microorganisms	Introducing students to pathogenic .microorganisms	5	Fourth
Daily and Monthly Reports and Exams	Theoretical Lectures Practical Lectures Presentation Methods Discussion and Dialogue	Microorganisms in water and sewage water	Introducing students to microorganisms found in water and .sewage water	5	Fifth
Daily and Monthly Reports and Exams	Theoretical Lectures Practical Lectures Presentation Methods Discussion and Dialogue	Preservation of microbial cell cultures	Teaching students how to preserve microbial cell .cultures	5	sixth

Daily and Monthly Reports and Exams	Theoretical Lectures Practical Lectures Presentation Methods Discussion and Dialogue	Introduction to microbiology laboratory equipment	Introducing students to laboratory equipment used for detecting .microorganisms	5	seventh
Daily and Monthly Reports and Exams	Theoretical Lectures Practical Lectures Presentation Methods Discussion and Dialogue	Preparation of culture media Sterilization	Teaching students how to prepare culture media and sterilization .methods	5	Eighth
Daily and Monthly Reports and Exams	Theoretical Lectures Practical Lectures Presentation Methods Discussion and Dialogue	Simple staining Differential staining (Gram staining Special staining (Spore staining	Teaching students different staining methods for .microorganisms	5	Ninth

Daily and Monthly Reports and Exams	Theoretical Lectures Practical Lectures Presentation Methods Discussion and Dialogue	Isolation of microorganisms	Teaching students methods of isolating microorganisms from various .sources	5	Tenth
Daily and Monthly Reports and Exams	Theoretical Lectures Practical Lectures Presentation Methods Discussion and Dialogue	Examination of bacterial movement (hanging drop (method	Introducing students to drop hanging microscopy to detect .bacterial movement	5	Eleventh
Daily and Monthly Reports and Exams	Theoretical Lectures Practical Lectures Presentation Methods Discussion and Dialogue	Counting microorganisms (Plate count (method	Teaching students how to count microorganisms using plate counting .methods	5	Twelfth

Daily and Monthly Reports and Exams	Theoretical Lectures Practical Lectures Presentation Methods Discussion and Dialogue	Examination of fungi	Teaching students how to examine .fungi	5	Thirteenth
Daily and Monthly Reports and Exams	Theoretical Lectures Practical Lectures Presentation Methods Discussion and Dialogue	Water examination (is it suitable for human consumption or (not	Teaching students how to examine .water	5	Fourteenth
Daily and Monthly Reports and Exams	Theoretical Lectures Practical Lectures Presentation Methods Discussion and Dialogue	Examination of bacterial sensitivity .to antibiotics	Teaching students how to test microorganism sensitivity and resistance to .antibiotics	5	Fifteenth

11. course Evaluation	
Distribution of the grade out of 100 according to the tasks assigned to the student, such as daily preparation, daily and oral exams, monthly exams, written exams, reports, etc.	
12. Learning and Teaching Resources	
Microbiology: Translation by Wafa Jasim, Hassan Mohsen Ali, 1986, Mosul University. Introduction to Microbiology: Translation by Dr. Khudhair Dawood, Mazahim Qasim, Wael Yaseen, 1985.	Required Textbooks (Curriculum-based, if (available
Soil Microbiology: Ghiath Qasim, Mudhir Abdul-Sattar, 1989, Mosul University.	(Main References (Sources
Fungi: Dr. Ibrahim Aziz, Dr. Kaisar Najib. Microorganisms: Dr. Najm Al-Din Al-Sharabi and others, 2004, Damascus University	Recommended Supporting Books and (.References (Scientific Journals, Reports, etc
https://www.scribd.com/document/491738379	Electronic References, Websites

Course Description Form

-1-Course name
Principles of dairy science
-2-Course code
DAIR240
-3-Semester/Year
2024 – 2023 (Spring semester)
-4-Date of preparation of this description
2024 -4-1
-5-Available forms of attendance
My presence
6- Number of study hours (total) / Number of units (total)
75 hours (2 theoretical + 3 practical) * 15 weeks
7- Name of course supervisor (if more than one name is mentioned)

Email :sadiq.fanjan@uomisan.edu.iq	Name: Assistant Professor Abdul-Ridha Ati Jafar Assistant Professor Sadiq Finjan Hasnawi

-8-Course objectives

●Introducing students to the components of milk and its high nutritional value, which makes it an important product from a nutritional, health, and economic perspective. ●Developing students' theoretical and practical skills that enable them to detect milk adulteration. ●Developing students' milk processing skills, such as making cheese, fermented milk, butter, skimmed milk, and dairy ice cream, among others. ●Teaching students how to protect milk from contamination by pathogenic microorganisms .	Course objectives

-9-Teaching and learning strategies

1. Presenting the curriculum using images and illustrations that facilitate students' understanding of the material. 2. Training students in conducting laboratory tests on dairy products, developing their skills in this field. 3. Conducting discussions and dialogues with students, which in turn enhances students' self-confidence.	Strategy

10- Course structure

Evaluation Method	Learning Method	Unit or Topic Name	Desired Learning Outcomes	watches	week
Daily and Monthly Reports and Exams	Theoretical Lectures	Examination of Milk Components	Enabling students to conduct tests on milk components	5	First
Daily and Monthly Reports and Exams	Practical Lectures	Chemical Composition of Milk	Introducing students to the chemical components of milk	5	Second

Third	5	Introducing students to the most important factors affecting milk production	Factors Affecting Milk Production	Presentation Methods	Daily and Monthly Reports and Exams
Fourth	5	Introducing students to milk proteins	بروتينات الحليب	المحاضرات النظري المحاضرات العملي طرق العرض المناقشة والحوار	Daily and Monthly Reports and Exams
Fifth	5	Introducing students to fats and fatty acids in milk	Milk fat, microscopic examination of fat, and fat percentage determination (Babcock and Kerber)	Theoretical Lectures	Daily and Monthly Reports and Exams
Sixth	5	Introducing students to how to estimate the concentration of fat in milk	Milk acidity determination	Practical Lectures	Daily and Monthly Reports and Exams
Seventh	5	Introducing students to how to detect adulteration in milk	Specific gravity and adulteration	Presentation Methods	Daily and Monthly Reports and Exams
Eighth	5	Introducing students to the important salts and vitamins found in milk	Milk salts and vitamins	Discussion and Dialogue	Daily and Monthly Reports and Exams
Ninth	5	Introducing students to milk sorting methods and factors affecting curd	Milk sorting, butter production, and factors affecting milking	Theoretical Lectures	Daily and Monthly Reports and Exams
Tenth	5	Introducing students to milk microbiology	Milk microorganisms	Theoretical Lectures	Daily and Monthly Reports and Exams

Daily and Monthly Reports and Exams	Practical Lectures	Cheese making	Introducing students to cheese-making methods	5	Eleventh
Daily and Monthly Reports and Exams	Presentation Methods	Dairy ice cream making	Teaching students to make ice cream	5	Twelfth
Daily and Monthly Reports and Exams	Theoretical Lectures	Quality control of milk received	Introducing students to milk quality control	5	Thirteenth
Daily and Monthly Reports and Exams	Practical Lectures	Milk handling in dairy factories	Introducing students to dairy laboratories	5	Fourteenth
Daily and Monthly Reports and Exams	Presentation Methods	Milk thermal treatments	Introducing students to milk thermal processing	5	Fifteenth

11- تقييم المقرر

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

12- Learning and Teaching Resources

General Dairy Principles by Dr. Mohsen Al-Shabibi, Dr. Nizar Shukri, Dr. Sadiq Jawad Taama, and Dr. Hilan Hamadi Ali, 1999	Required textbooks (methodology, if available)
General Dairy Principles by Gamal Abdel Tawab	Primary references (sources)
Dairy Principles by Ramzi Abdel Rahman	Recommended supporting books and references (scientific journals, reports, etc.)
https://www.scribd.com/document/491738379	Electronic references, websites

MODULE DESCRIPTION FORM

Module Information معلومات المادة الدراسية

Module Title	industrial crops			Module Delivery
Module Type	Core			☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	INCR212			
SWL (hr/sem)	75			
Module Level	2U(	Semester of Delivery	1	
Administering Department	Food science	College	Agriculture	
Module Leader	*Sadeq Fenjan Hasnawi*	e-mail	sadiq.fanjan@uomisan.edu.iq	
Module Leader's Acad. Title	lecturer	Module Leader's Qualification	Ph.D.	
Module Tutor	Sadeq Fenjan Hasnawi	e-mail	sadiq.fanjan@uomisan.edu.iq	
Peer Reviewer Name	Name	e-mail	E-mail	
Scientific Committee Approval Date		Version Number	1.0	

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

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	the following can be reached:- • Preparing scientific cadres specialized in the science and technology of modern food manufacturing. • Developing the study skills of students • Understanding the nature of agricultural work based on international and local statistical standards. • Providing students with knowledge of the nature and function of agricultural methods for industrial crops.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	The graduate of the department is awarded a degree (Bachelor of Food Sciences) And acquires the following skills: 1- The ability to know industrial crops 2- The ability to know and bear responsibility. 3- The ability to communicate. 4- The ability to use skills in food sciences.

	5- The ability to intertwine with other disciplines to serve them
Indicative Contents المحتويات الإرشادية	The guiding content includes the following. •Instructions for students and workers on equipment related to laboratory industrial crops •Getting to know some of the devices related to laboratory industrial crops •Opening the door for discussion and questions with students •Conducting visits to Biochemistry laboratorys • Conducting experiments related to the science of industrial crops

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	1- Presenting the curriculum using images and illustrations that facilitate students' understanding of the material. 2- Training students to conduct laboratory tests in a way that develops their skills in this area. 3- Conducting discussions and dialogues with students , which in turn enhances students' self-confidence.

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

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

	Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
١	Material Covered
Week 1	Introduction to Industrial Crops – Definition – Importance – Classification
Week 2	Oil Crops – Chemical Composition of Vegetable Oils
Week 3	Sesame Crop – Economic Importance – Suitable Environment – Sesame Varieties
Week 4	
Week 5	Pistachio Crop – Economic Importance – Suitable Environment – Varieties
Week 6	First Month Exam
Week 7	Sunflower Crop – Economic Importance – Suitable Environment – Varieties
Week 8	Soybean Crop – Economic Importance – Suitable Environment – Varieties
Week 9	Rapeseed Crop – Economic Importance – Suitable Environment – Varieties
Week 10	Cotton Crop – Economic Importance – Suitable Environment – Varieties
Week 11	Flax Crop – Economic Importance – Suitable Environment – Varieties
Week 12	Second Month Exam
Week 13	Students' knowledge of the importance of sugar crops and their role in stimulating the economy Through financial returns
Week 14	Sugar beet crop – economic importance – suitable environment – varieties
Week 15	Fiber crops – economic importance – suitable environment

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
١	Material Covered
Week 1	The most important agricultural service operations applied in the cultivation of industrial crops
Week 2	Methods of extracting oils from oil crops
Week 3	Botanical description and agricultural service operations for sesame
Week 4	Botanical description and agricultural service operations for pistachio

Week 5	Lab 5: First month exam
Week 6	Botanical description and agricultural service operations for sunflower
Week 7	Botanical description and agricultural service operations for soybean
Week 8	Botanical description and agricultural service operations for rape
Week 9	Botanical description and agricultural service operations for cotton
Week 10	Botanical description and agricultural service operations for flax
Week 11	Second Month Exam
Week 12	Introduction, explanation of their economic importance, types of sugars, global Sugar crops: and Arab sugar production and consumption
Week 13	Botanical description and agricultural service operations for sugar beet
Week 14	Botanical description and agricultural service operations for sugarcane
Week 15	Definition Fiber crops and their industrial importance

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	1- Al-Baldawi and others. 2014. Principles of Field Crops Production. 2- Safar, Nasser Hussein. 1990. Oil and Sugar Crops. 3- Rizk and Ali. 1981. Oil and Sugar Crops	Yes
Recommended Texts	Mahmoud Al-Shaer and others. 2015. Oil, sugar and wheat crops.	Yes
Websites		

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

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

second semester

Course Description / Food Laboratory Management

Course Name / Food factories Management
Course code 301/
Semester/Year/Spring Semester/Second Stage
Date this description was prepared 2025 -3-12 //
Available attendance forms // Weekly
Number of study hours (total) / Number of units (total) // 30 theoretical hours / 2 units
Course administrator name (if more than one name is mentioned)
Name: Dr . Anwaar Yasser

:anwaaryaser@uomisan.edu.iq

M.M. Rasha Naji Abdel-Aleem

: rashanaji@uomisan.edu.iq

Course objectives

Theoretical section // Provides a general overview of food plant management, including the historical development of the food industry and its importance, as well as management in terms of concept and functions, in addition to production management, human resources management, warehouse management, marketing management in food plants, and health regulations and industrial relations specific to food plants. Practical section // None.	Course objectives

Teaching and learning strategies

1- Explanation and clarification 2- Lecture method 3- Student groups	Strategy

Course structure

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	hours	week
tests	Explanation	Food	Historical development	Theoretical	the first

	and presentation of the lecture model	Laboratories Management	of food industries, importance of food industries	2	
	nothing	nothing	nothing	Practical 3	
	Explanation and presentation of the lecture model	Food Laboratories Management	The concept of management; the importance of management; the functions of management	2 Theoretical	the second
	nothing	nothing	nothing	Practical 3	
	Explanation and presentation of the lecture model	Food Laboratories Management	Planning in food factories	2 Theoretical	the third
	nothing	nothing	nothing	Practical 3	

	Explanation and presentation of the lecture model	Food Laboratories Management	Organization in food factories	2 Theoretical	Fourth
	nothing	nothing	nothing	Practical 3	
	First month test			2 Theoretical	Fifth
	nothing			Practical 3	
	Explanation and presentation of the lecture model	Food Laboratories Management	Guidance in food laboratories	2 Theoretical	Sixth
	nothing	nothing	nothing	Practical 3	
	Explanation and	Food Laboratories	Food laboratory control	2 Theoretical	Seventh

	presentation of the lecture model	Management			
	nothing	nothing	nothing	Practical 3	
	Explanation and presentation of the lecture model	Food Laboratories Management	Production management in food factories	2 Theoretical	Eighth
	nothing	nothing	nothing	Practical 3	
	Explanation and presentation of the lecture model	Food Laboratories Management	Marketing management in food factories	2 Theoretical	Ninth
	nothing	nothing	nothing	Practical 3	

	Second month test			2 Theoretical	tenth
	nothing			Practical 3	
	Explanation and presentation of the lecture model	Food Laboratories Management	Human Resources Management in Food Laboratories	2 Theoretical	eleventh
	nothing	nothing	nothing	Practical 3	
	Explanation and presentation of the lecture model	Food Laboratories Management	Financial management in food factories	2 Theoretical	twelfth
	nothing	nothing	nothing	Practical 3	
	Explanation and presentation	Food Laboratories Management	Inventory management in food factories	2 Theoretical	thirteenth

	of the lecture model				
	nothing	nothing	nothing	Practical 3	
	Explanation and presentation of the lecture model	Food Laboratories Management	Hygiene rules in food factories and industrial relations	2 Theoretical	fourteenth
	nothing	nothing	nothing	Practical 3	
	Third month test			2 Theoretical	fifteenth
	nothing			Practical 3	

Course evaluation				
Final exam	Project or report	Daily exams	Practical exams	Monthly exams
%50	-	%5	-	%45

Learning and teaching resources	
Food Laboratories Management, Al-Takriti and others	Required prescribed books
Helan Hammadi Ali Al-Tikriti, Food Laboratories Department, University of Baghdad, College of Agriculture, 1986	Main references (sources)
Hassoun Muhammad Ali Al-Haddad, Department of Food and Dairy Laboratories, University of Basra, College of Agriculture, 1986.	Recommended supporting books and references (scientific journals and reports)
	Electronic references, websites

MODULE DESCRIPTION FORM

Module Information معلومات المادة الدراسية			
Module Title	Principles of Agricultural Extension	Module Delivery	
Module Type	Core	☒ Theory ☒ Lecture ☒ Tutorial ☒ Seminar	
Module Code	AGEC129		
ECTS Credits	5		
SWL (hr/sem)	125		
Module Level		Semester of Delivery	SEMESTER OF fIFTH

Administering Department	Principles of Agricultural Extension	College	College of Agriculture
Module Leader	Dr. Alaa Kazem Farhan	e-mail	alaa.k.f@uomisan.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	
Module Tutor		e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date	19/1/2025	Version Number	

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

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	5. Introducing students to the importance of agricultural extension in the agricultural process. 6. Introducing rural leadership and its role in transferring the new from modern sciences and using them in the agricultural process. 7. Introducing students to the tasks performed by the agricultural advisor. 8. Introducing students to rural leaders and their role in the agricultural extension process. 9. Introducing students to the categories of adopters of agricultural innovations. 10. Introducing students to the methods used to introduce the new innovations that serve the agricultural process.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	Students will learn: 19. Clarifying the basic concepts and principles of agricultural extension 20. Address possible problems that arise in how economic resources are used in the production process.How to plan the production process. 21. Familiarize the student with the distribution of leadership roles in the counseling process.

	22. Introducing students to the tasks performed by the agricultural advisor. 23. Introducing students to the categories of adopters of agricultural innovations. 24. Introducing students to the methods used to introduce the new innovations that serve the agricultural process.
Indicative Contents المحتويات الإرشادية	• Introduction, main principles of agricultural extension, main definitions of agricultural extension science. • Publicizing agricultural problems and their causes. • Study the relations between the agricultural extension and the extension and its mutual potential. • Study the relationships between agricultural extension and rural women's development and. • Study of adopter categories. • Studying the development of the rural community and ways to improve its level of suffering.

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The main strategy that will be adopted in offering this module is to encourage students' participation in discussion and lectures, while at the same time improving and expanding their critical thinking skills. This will be achieved through classrooms where learning takes place through classroom lectures, participation in lecturing, and snap, semester and final exams.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	48	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	8.3
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	77	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	3.2
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	125		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	20% (20)	5 and 10	LO #1, #2 and #7, #6
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.				
	Report	2	10% (10)	13	LO #5, #7 and #8
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction to the science of agricultural extension.
Week 2	Agricultural Advisor ... Who is he and what are his roles?
Week 3	Rural Leaders.
Week 4	Principles and objectives of agricultural extension work.
Week 5	The process of guidance communication and its elements
Week 6	Factors affecting the process of guidance communication.
Week 7	examination
Week 8	.New agricultural technology

Week 9	Evaluation of Mentorship Programs.
Week 10	Areas of Evaluation of Guidance Programs.
Week 11	Ways to adopt modern ideas.
Week 12	Categories of adopters of new technologies.
Week 13	The place of agriculture in the economy and its place in economic development.
Week 14	The relationship of agricultural extension to some applied sciences.
Week 15	Preparatory week before the final Exam
Week 16	examination

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	- Contemporary Agricultural Extension, Dr. Ahmed Mohamed / Faculty of Agriculture - Cairo University.	
Recommended Texts	Agricultural Extension, Dr. Ahmed Galal Owais / Faculty of Specific Education - Cairo University	
Websites		

Grading Scheme مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria

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

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

lMODULE DESCRIPTION FORM

Module Information معلومات المادة الدراسية				
Module Title	Storage Pest		Module Delivery	
Module Type	Basic		☒ Theory ☐x Lecture ☐x Lab ☐x Tutorial ☒ Practical ☐ Seminar	
Module Code	MPP3534			
ECTS Credits	5			
SWL (hr/sem)	125			
Module Level	2	Semester of Delivery	4	
Administering Department	FOOD Science	College	Agriculture	
Module Leader	Ali Hussein Ali	e-mail	Ali_hussain@uomisan.ed.iq	
Module Leader's Acad. Title	Teacher	Module Leader's Qualification	M.Sc	
Module Tutor	N.A.	e-mail	N.A.	
Peer Reviewer Name	N.A.	e-mail	N.A.	
Scientific Committee Approval Date	4/10/2024	Version Number	1.0	

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Prerequisite module	None	Semester	
Prerequisite module	None	Semester	
Prerequisite module	None	Semester	
Co-requisites module	Insect laboratory	Semester	4

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	1. . Pests found in warehouses givetudents a complete idea about us 2. Knowing how much damage these pests can cause. 3. Teaching students the most important methods of detecting and diagnosing these pests. 4. Developing students' abilities to recognize the signs and symptoms caused by pests in stores and fields and 5. distinguishing them from symptoms caused by other insect pests. 6. To provide students with basic skills and how to deal with and control the infestations caused by these pests in warehouses. 7. Developing students' abilities to eliminate these pests in safe ways.

Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Ability to analyze problems and suggest appropriate solutions. 2. The ability to participate with confidence and success in agricultural projects in terms of technical and administrative aspects. And communicate effectively with the relevant parties to resolve them. 3. Applying acquired concepts and skills in diverse contexts. 4. Developing capabilities to enable working independently and effectively as part of a team. 5. effective methods to protect stored materials from warehouse pests. 6. Use Knowing how environmental factors affect and how they affect insect and non-insect pests.
Indicative Contents المحتويات الإرشادية	1. participation in the lecture topics through discussion. 2. Students diagnose some types of warehouse pests by collecting infected specimens. 3. Use of light and conventional microscopes to identify types of store pests . 4. Identifying warehouse pests through field visits to grain stores.

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	1. Use the lecture method to deliver information. 2. Encouraging students to obtain information by requiring them to submit scientific reports. 3. Training students on the logical discussion cup to reach the results. 4. Learning through field and mental.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	108	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	7.2
Unstructured SWL (h/sem)	17	Unstructured SWL (h/w)	1.13

الحمل الدراسي غير المنتظم للطالب خلال الفصل		الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	125		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	2#8	3
	Assignments	2	10% (10)	1#6#7	63#
	Projects / Lab.	4	10% (10)	6#8	4
	Report	2	10% (10)	2#9	5
Summative assessment	Midterm Exam	2hr	10% (10)	7	ALL
	Final Exam	3hr	50% (50)	16	ALL
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	The importance of storing grains.
Week 2	Factors affecting the nutritional value and spoilage of grains during storage. Properties of grains.
Week 3	Insect damage to stored materials, conditions suitable for the growth of storage fungi on grains.
Week 4	Classification and diagnosis of important grain and stored material insects according to families.

Week 5	Origin of storehouse insects, storehouse insects prefer to reproduce on grains.
Week 6	of insect infestation of stored materials, detection of insect infestation in stores, examination and taking samples.
Week 7	Midterm Examination.
Week 8	Methods of controlling stored material insects, traditional methods of control, modern methods of control.
Week 9	.Biological control, legislative control and chemical control
Week 10	Mycotoxins, factors affecting the formation of mycotoxins, general properties of mycotoxins
Week 11	Study of the biological and environmental aspects of the most important types of warehouse insects.
Week 12	Study of insects of the legume family.
Week 13	Study of the most important non-insect grain and stored materials, science and its economic .importance and the impact on stored grains
Week 14	Rodents: Economic importance, the most important types of rodents found in grain and food .stores, and their classification
Week 15	Harmful birds in grain stores, their types, their importance from an agricultural perspective, and methods of controlling them.
Week 16	Final exam.

Delivery Plan (Weekly Practical Syllabus) المنهاج الاسبوعي للمختبر	
٧	Material Covered
Week 1	Symptoms of infestation of grains and other stored materials with different types of storage insects.
Week 2	Distinguishing between internal and external types of infection on stored infected grains, comparing them with some types of grains healthygrains free of infection .
Week 3	Review of some methods for detecting internal infection of grains, with the implementation of four types of laboratory experiments (dye method. Transparency, X-ray, grinding and sterilization
Week 4	Methods of colectance acts with methods of preserving insects

Week 5	Studying the most important types of warehouse insects, diagnosing them and distinguishing between their different types, the Sedney and similar flour beetles
Week 6	Small grain borer Sawtooth grain beetle, Cuddle beetle, Tobacco beetle.
Week 7	Field visit.
Week 8	Study the morphological characteristics of grain weevil species and distinguish between them: rice weevil, grain weevil, yellow corn weevil. and distinguish between the damage each species causes to the hosts it infects.
Week 9	Carpet beetle, carpet beetle, clothes moth of all types and distinguishing between the different damages they cause to the types of infected fabrics.
Week 10	Legume family insects: large bean beetle, southern bean beetle, chickpea beetle, lentil beetle, bean beetle, distinguishing between their different types and identifying different types of infestation
Week 11	Field visit.
Week 12	Study of different types of warehouse mites and types of predatory mites.
Week 13	Identify different types of rodents, distinguish between them, and notice some of their harmful effects.
Week 14	Learn about some types of harmful birds with pictures and slides.
Week 15	Field vist.

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Mahdi 1983) Warehouse insects Al-Azzawi, Abdullah Falih and Muhammad Tahir.	Yes
Recommended Texts		
Websites	All agricultural magazines and magazines related to warehouse pests.	

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

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

MODULE DESCRIPTION FORM

Module Information معلومات المادة الدراسية				
عنوان الوحدة	Baath regime crimes in Iraq		Module Delivery	
نوع الوحدة	Support		☒ نظرية ☐Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar	
رمز الوحدة	University of Maysan			
ECTS Credits	2			
SWL (hr/sem)	50			
Module Level	1 1		Semester of Delivery	One
Administering Department	Food sciences		College	Agriculture

Module Leader			e-mail		
Module Leader's Acad. Title		Assistant Teacher.	Module Leader's Qualification		M.SC.
Module Tutor	Hussein Zughair Jassim		e-mail	hussein.zghair@uomisan.edu.iq	
Peer Reviewer Name		Name	e-mail	E-mail	
Scientific Committee Approval Date			Version Number		

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

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	. Introducing students to the concept of crimes and their types.1 . Introducing students to the types of international crimes.2 . ntroducing students to the decisions issued by the Supreme Criminal Court.3 Emphasizing the features and characteristics of crime departments.4 . Emphasizing the application of the crime and its violation of Iraqi laws.5
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	he student should know the concept of Baath crimes and their violation of laws and-1 their applications The student should know how to deal with people and apply penalties for -2 violations The ability to prosecute perpetrators among the components of society -3 The ability to share with others in spreading these violations and raising -4. awareness among members of society The ability to analyze and define the concept of crimes and distinguish -5 . between different types of crimes Identifying crime issues at the national and international levels and their -6 . impact on public opinion
Indicative Contents المحتويات الإرشادية	Crimes and their types Mass grave crimes

	Violations of Iraqi laws human rights violations

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	Participate in classroom preparation-1 Question and answer method in the classroom -2 Duties -3 Reports -4

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	32	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	3
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	18	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	50		

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

Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Definition of crimes
Week 2	Types of crimes
Week 3	International crimes and social crimes
Week 4	Mass grave crimes and psychological crimes
Week 5	Crimes of the Ba'ath regime according to the Iraqi Supreme Criminal Court Law of 2005
Week 6	Decisions issued by the Supreme Criminal Court
Week 7	exam
Week 8	human rights violations
Week 9	Violations of Iraqi laws
Week 10	draining the marshes
Week 11	Genocide graves events
Week 12	Baath regime prisons and detention centers
Week 13	Destruction of cities and villages
Week 14	The Baath regime's position on religion
Week 15	final exam

Learning and Teaching Resources مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Diamond L. & M. F. Plattner, eds., (2009), Democracy. A Reader, Baltimore, Johns Hopkins University Press.	Yes
Recommended Texts	مفهوم الجرائم	
Websites	http://ghrorg-learning.blogspot.com	

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

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

MODULE DESCRIPTION FORM

Module Information معلومات المادة الدراسية		
Module Title	Democracy and Human Rights	Module Delivery
Module Type	Basic	☒ Theory
Module Code	UOB104	

ECTS Credits	2	☐Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar
SWL (hr/sem)	50	

Module Level	UGx11 1	Semester of Delivery	1
Administering Department	Food sciences	College	Agriculture
Module Leader		e-mail	
Module Leader's Acad. Title	Assistant Teacher.	Module Leader's Qualification	M.SC.
Module Tutor	Hussein Zughair Jassim	e-mail	hussein.zghair@uomisan.edu.iq
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date		Version Number	

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

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives أهداف المادة الدراسية	Teaching students the basics of human rights and their laws.1 . Identify the most important rights and the most important problems and .2 challenges they face . Identify and understand concepts related to our freedoms, including .3 individual rights and personal freedoms Developing the ability to think critically about issues related to individual .4 freedoms and rights
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	. The student should know the concept of rights, their laws and applications-1 he student should know how to participate in spreading rights and their .2 applications through real, practical work The ability to use rights as a means for peaceful coexistence among the -3 components of society The ability to share these rights with others. . -4

	The ability to analyze and define the concept of freedom and distinguish between different types of freedoms ١-5 Interacting with freedom issues at the national and international levels and influencing the formation of public opinion. -6
Indicative Contents المحتويات الإرشادية	Fundamental and non-fundamental rights and freedoms Civil rights and liberties political rights Human Rights and International Humanitarian Law

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	Participate in classroom preparation.1 Question and answer method in the classroom -2 Duties -3 Reports -4

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	32	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	3
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	18	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	50		

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

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

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
Week	Material Covered
Week 1	Definition of rights
Week 2	Types of human rights
Week 3	ndamental and non-fundamental rights
Week 4	Civil and political rights
Week 5	Economic, social and cultural rights, individual rights and collective rights
Week 6	New Rights Sect Human Rights and International Humanitarian Law The Relationship Between Human Rights and International Humanitarian Law
Week 7	exam
Week 8	What is the concept of freedoms? The term freedom and public freedoms
Week 9	The evolution of the concept of public freedoms
Week 10	Forms and types of public freedoms
Week 11	The legal system of public freedoms
Week 12	Regulation of public freedoms by public authorities
Week 13	Guarantees of public freedoms
Week 14	Freedoms in modern political thought

Week 15	final exam

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Diamond L. & M. F. Plattner, eds., (2009), Democracy. A Reader, Baltimore, Johns Hopkins University Press.	Yes
Recommended Texts	مفهوم الحريات العامة وحقوق الانسان، اطارها التاريخي والفكري والفلسفي، وضماناتها الأساسية	
Websites	http://ghrorg-learning.blogspot.com	

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

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

MODULE DESCRIPTION FORM

Module Information معلومات المادة الدراسية					
Module Title	Biochemistry			Module Delivery	
Module Type	Core			☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar	
Module Code	DAIR240				
SWL (hr/sem)	75				
Module Level	2U(		Semester of Delivery	2	
Administering Department	Food science		College	Agriculture	
Module Leader	*Abdulridha Ati Jaafar*		e-mail	ridha84@uomisan.edu.iq	
Module Leader's Acad. Title	lecturer		Module Leader's Qualification	Ph.D.	
Module Tutor	Sadeq Fenjan Hasnawi		e-mail	sadiq.fanjan@uomisan.edu.iq	
Peer Reviewer Name	Name		e-mail	E-mail	
Scientific Committee Approval Date			Version Number	1.0	

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

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	the following can be reached:- • Introducing students to the basics of biochemistry • Developing students' theoretical and practical skills regarding the cell and carbohydrates in their various parts • Developing students' skills to distinguish between monosaccharides, disaccharides, and polysaccharides, as well as aldehydes and ketones • Introducing students to proteins and lipids and their various parts
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	The graduate of the department is awarded a degree (Bachelor of Food Sciences) And acquires the following skills: 2- The ability to know Biochemistry 2- The ability to know and bear responsibility. 3- The ability to communicate. 4- The ability to use skills in food sciences.

	5- The ability to intertwine with other disciplines to serve them
Indicative Contents المحتويات الإرشادية	The guiding content includes the following. •Instructions for students and workers on equipment related to laboratory Biochemistry •Getting to know some of the devices related to laboratory Biochemistry •Opening the door for discussion and questions with students •Conducting visits to Biochemistry laboratorys • Conducting experiments related to the science of Biochemistry

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	1- Presenting the curriculum using images and illustrations that facilitate students' understanding of the material. 2- Training students to conduct laboratory tests in a way that develops their skills in this area. 3- Conducting discussions and dialogues with students , which in turn enhances students' self-confidence.

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

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

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
١	Material Covered
Week 1	Introducing students to the cell and the important parts it consists of.
Week 2	*Introducing students to carbohydrates and their different types.*
Week 3	Introducing students to the most important monosaccharides.
Week 4	Introducing students to polysaccharides.
Week 5	First month exam
Week 6	Introducing students to amino acids.
Week 7	Introducing students to the essential and non-essential amino acids.
Week 8	Introducing students to proteins and their importance.
Week 9	Introducing students to the structure, composition, and types of proteins.
Week 10	Introducing students to saturated and unsaturated fatty acids and their reactions.
Week 11	Introducing students to simple lipids, their structure, and types.
Week 12	Introducing students to complex and derived lipids.
Week 13	Introducing students to the importance of nucleic acids.
Week 14	Introducing students to the types and structure of nucleic acids.
Week 15	Introducing students to enzymes and the factors affecting them.

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
١	Material Covered
Week 1	Introduction - The Cell
Week 2	Carbohydrates - Definition - Divisions
Week 3	Monosaccharides
Week 4	Polysaccharides
Week 5	Lab 5: First month exam
Week 6	Introduction to Amino Acids - Divisions - Reactions
Week 7	Divisions of Amino Acids and Their Reactions
Week 8	Proteins - Structure - Structure - Divisions
Week 9	Structure, Structure, and Divisions of Proteins

Week 10	Fatty Acids - Divisions - Reactions
Week 11	Simple Lipids - Structure - Divisions
Week 12	Compound and Derived Lipids - Structure - Divisions
Week 13	Nucleic Acids
Week 14	The Importance of Nucleic Acids, Their Divisions, and Structure
Week 15	Enzymes, Their Properties, and Factors Affecting Them

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Hassan, Ali Mohammed and Shehab, Saad Khalil. Agricultural Biochemistry. University of Baghdad. Iraq. Biochemistry Dr. Sami Al-Muzaffar	Yes
Recommended Texts	Fundamentals of Biochemistry Dr. Jassim Jandal Introduction to Biochemistry Dr. Khawla Ahmed	Yes
Websites	https://www.scribd.com/document/491738379	

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

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

Course Description Form for Food Hygiene, Department of Food Science

Course Name	.1

Health Food	
symbol The decision: .2	
FOSA238	
Chapter/ The year: Annual .3	
Second Spring TermPhase II - 2024-2025	
Date of preparation of this description .4	
1/18/2025	
Available forms of attendance: .5	
My presence	
Number of study hoursTotal/Number of units (total): .6	
2 My theory 3 Practical 3.5/ Unit	
Name Responsible The decision Academic) If More From Name He mentions(.7	
M. Shabib Munshid Jassim shabib.mandesh@uomisan.edu.iq MDr. Mustafa Adnan Eidan	
Goals The decision .8	
practical - The student learns the meaning of food health and safety. - The student is able to examine microbial evidence in food. - Can detect botulism bacteria - Identifies colon bacteria that cause intestinal infections - Identifies the cause of staphylococcal poisoning and its pathogenic types	Theoretical - Enabling the student to understand and comprehend what is related to microbial, chemical, physical and radioactive food contaminants. and food. Causative For allergies - Enabling the student to know the most important ways to protect humans from chemical and microbiological food pollutants. -Enabling the student to become familiar with the most important sources of food contamination.-Enabling the student to detect different types of food spoilage.
Strategies Education and Learning .9	
practical - Lecture Interactive - The nerve mental - Dialogue and discussion - Assigning reports	Theoretical - Interactive lecture - Brainstorming

- Conducting monthly and daily exams.	- Dialogue and discussion - Assigning reports - Conducting monthly and daily exams.

.10
structure The decision

Method Evaluation	Method Learning	Name Unit or Subject	Outputs Learning Required	hours	week
Short exams, homework assignments, Discussions	Theoretical Auditory methods, writing on the board, direct dialogue method	My theory Food Hygiene and Food Safety	My theory :b1 Explains the concept of health to the student Food, food safety, and the difference between healthy food and safe food	2 My theory	1
Short exams, homework assignments, Discussions	Practical assignment of tasks and reports	Practical The concept of food hygiene	Practical :a1 The student learns the importance of food safety.	3 Practical	
Short exams, homework assignments, Discussions	Theoretical Auditory methods, writing on the board, direct dialogue method	My theory foodborne diseases	My theory C1 Explain to the student the most important foodborne diseases based on the chemical composition of the food and the difference in contaminants depending on the type of food. Nutritional	2 My theory	2
Short exams,	Practical assignment of	Practical Microbial evidence	Practical :e1The student judges the	3 Practical	

homework assignments, Discussions	tasks and reports		healthiness of food through microbial evidence.		
Short exams, homework assignments, Discussions	Theoretical Auditory methods, writing on the blackboard Direct dialogue method	Human pathogens	My theory :b2 The student is familiar with the factors affecting the spread of pathogens to humans.	2 My theory	3
Short exams, homework assignments, Discussions	Practical assignment of tasks and reports	My work Total bacterial count	Practical b1: The student can know the total number of bacteria.	3 Practical	
Short exams, homework assignments, Discussions	Theoretical Auditory methods, writing on the board, direct dialogue method	My theory Conditions that help microbes grow in food	My theory :a1 The student learns about the mechanisms that help microbes grow in food.	2 My theory	4
Short exams, homework assignments,	Practical assignment of tasks and reports	Practical isolation of bacteriaBacillus From food samples	Practical :b2 The student learns about bacterial toxins. How to diagnose it?	3 Practical	

Discussions					
Short exams, homework assignments, Discussions	My theory Auditory methods, writing on the blackboard Direct dialogue method	My theory The most common diseases transmitted to humans through food	My theory :c2Explain to the student the changes and conditions that help microbes grow in food.	2 My theory	5
Short exams, homework assignments, Discussions	Practical assignment of tasks and reports	Practical Food poisoning and its types	Practical :a2 The student is able to diagnose the microbial content. Healthy and spoiled food samples	3 Practical	
Short exams, homework assignments, Discussions	My theory Auditory methods, writing on the blackboard Direct dialogue method	My theory Hazard Analysis and Critical Control Points (HACCP) system	My theory c3: Suggest to the student an appropriate method for diagnosing the most common foodborne illnesses.	2 My theory	6
Short exams, homework assignm	Practical assignment of tasks and reports	Practical Isolation and cultivation of bacteria Clostridium	Practical :b3 The student can isolate bacteriaclostridiumProviding anaerobic conditions for them	3 Practical	

ents, Discussions					
Short exams, homework assignments, Discussions	My theory Auditory methods, writing on the blackboard, dialogue method Direct	My theory Control of chemical and microbiological pollutants	My theory :c4 The student is familiar with the most important factors in controlling food contamination through the Hazard Analysis and Critical Control Points system.	2 My theory	7
Short exams, homework assignments, Discussions	Practical assignment of tasks and reports	Practical A scientific visit to a food factory	Practical :b4 A scientific visit to learn about manufacturing processes and the possibility of avoiding pollution In it	3 Practical	
Short exams, homework assignments, Discussions	My theory Auditory methods, writing on the board, direct dialogue method	My theory Types of food hazards and how to control them	My theory :a2 The student learns the most important methods of controlling chemical, physical and microbiological pollutants.	2 My theory	8
Short exams, homework assignments, Discussions	The process of assigning tasks and reports	Practical The intestinal family	Practical :a3 The student can isolate coliformbacteria From different food sources	3 Practical	

Short exams, homework assignments, Discussions	My theory Auditory methods, writing on the board, direct dialogue method	My theory Formation of the HACCP system team	My theory :b3 The student judges the efficiency of food manufacturing and preservation methods by knowing the types of hazards. In food and how to control it	2 My theory	9
Short exams, homework assignments, Discussions	Practical assignment of tasks and reports	Practical Isolation bacteria E.coli	Practical :b3 It can isolate and identify colon bacteria from different foods.	3 Practical	
Short exams, homework assignments, Discussions	My theory Auditory methods, writing on the board, direct dialogue method	My theory Chemical food contaminants	My theory :a3 The student learns the most important factors that must be taken into consideration when forming a computer team.	2 My theory	
Short exams, homework assignments, Discussions	Practical assignment of tasks and reports	Practical Isolation bacteria Samplesfrom Salmonella Food	Practical :b6 It can isolate and diagnose bacteria And her abilitysalmonella On the events of the disease	3 Practical	
Short exams, homework assignments, Discussions	My theory Auditory methods, writing on the board, direct dialogue method	My theory Types of heavy metals that cause poisoning in humans	My theory :b4The student masters the method of controlling chemical pollutants and contamination with food additives.	2 My theory	
Short exams, homework	The process of assigning	Practical Distinguish between bacteria Shigella And	Practical :b7 The student will be able to distinguish between bacterial species and examine food to	3 Practical	

assignments, Discussions	tasks and reports	Salmonella	ensure it is free of these pathogenic species.		
Short exams, homework assignments, Discussions	My theory Auditory methods, writing on the board, direct dialogue method	My theory Contamination by food additives	My theory E1 The student identifies the types of heavy metals that are toxic to humans.	2 My theory	
Short exams, homework assignments, Discussions	Practical assignment of tasks and reports	Practical Isolation and diagnosis Staphylococcus bacteria	Practical :a4 The student can isolate the bacterial species. From food samples	3 Practical	

Short exams, homework assignments , Discussions	My theory Auditory methods, writing on the board, direct dialogue method	My theory The most dangerous food additives to human health	My theory :a4 The student learns about the danger of adding nitrates and nitrites to canned meat, the danger of adding potassium permanganate to sterilize vegetables,The danger of adding sodium benzoate to pickles	13 theory	2 My
Short exams, homewok assignmes,discussis	Practical assignment of tasks and reports	Practical Staphylococcusbacteriai s o l a t i o n	Practical :b8It can diagnose bacteriastaphylococcus With special confirmatory tests	3 Practical	
Short exams, homework assignmes, discussis	My theory Auditory methods, writing on the board, direct dialogue method	My theory Chemical pesticide poisoning	My theory :a5 The student is aware of the effect of chemical pesticides present in food on the occurrence of kidney failure in humans.	14 theory	2 My
Short exams,homework assignnts, Discussions	The process of assigning tasks and reports	Practical Mycotoxin production	Practical :a5 The student can prepare and store the mushroom boards.	3 Practical	

Short exams, homework assignments, Discussions	My theory Auditory methods, writing on the board, direct dialogue method	My theory Field visit to several research laboratories and quality control laboratories and submitting a report on the project.Student on a visit The mentioned	My theory :b5 The student is able to submit a comprehensive report on the scientific visits that have been conducted.	2 My theory	15
Short exams, homework assignments, Discussions	Practical assignment of tasks and reports	Practical Laboratory production and testing of mycotoxins	Practical :b9 The student can conduct a toxin production experiment. Instinct and its observation	3 Practical	

Relative	degree	
weight%	2.5	Evaluation dateweek Fourth week Fifth week Sixth week Fourteenth week Fifteenth week Sixteenth week Eleventh week Final semester exams Fifteenth week
2.5	2.5	11 Evaluation The decision
2.5	2	Evaluation methods
2	2	1 Report 1
2	1	2 Report 2
1	7.5	3 short test(1) Quiz 4 Short test (2) Quiz 5 Short test (3) Quiz 6 Midterm test (1)
7.5	7.5	7 midterm exam(2)8 Final theoretical exam
7.5	40	9 Practical field project
40	5	

2	2	The third and fifth weeks	Field evaluation	10
1	1	First week	A short practical test(1) Quiz	11
0.5	0.5	The fourth week	A short practical test(2) Quiz	12
1	1	Fourteenth week	A short practical test(3) Quiz	13
5.5	5.5	Weeks6And8And9And10 And11And12And13	Direct fees and homework	14
20	20	Final semester exams	Final practical exam	15
100%	100%	100	Total	

Course Description Form

1. Course Name: Physical Chemistry
2. Course Code: DAAE319
3. Semester / Year: 2024-2025 Second Phase - Spring (Second) Semester

4. Description Preparation Date: 1/10/2024	
5. Forms of Attendance: Weekly	
6. Number of Studying Hours (Total) / Number of Units (Total) 75 hours	
7. Course Administrator's Name (mention all, if more than one name)	
Name: Dr. Yahya Ajib Oudeh	Email: Yahya.ajjb@uomisan.edu.iq

8. Course Objectives	
Course Objectives	•The course focuses on defining the basic terms and concepts in physical chemistry, addressing the general gas law, studying thermodynamics and vapor pressure of liquids, and understanding ideal solutions and the general properties of solutions. •Providing a general understanding of physical chemistry and introducing students to the importance of studying this subject as an applied science. •Enriching students with knowledge related to physical chemistry, laws, theoretical and practical foundations, and modern and ancient methods for interpreting the laws of physics and utilizing them in the field of food science. •Introducing students to the concept of physical chemistry, the concept of solutions and their composition. It also teaches students how to handle and mix solutions, as well as calculation methods. It teaches students the basics of solutions, methods for preparing them, calculation methods, and general gas laws. •The practical aspect focuses on linking theoretical information with practical experiments related to food testing, such as measuring the refractive index, measuring light intensity, viscosity, etc., i.e., the most important tests performed in food laboratories.

9. Teaching and Learning Strategies	
Strategies	•Explanation and clarification •Lecture method •Student groups •Practical lessons in chemistry labs

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2 Theory, 3 Practical	Introducing students to physical chemistry, properties and states of matter, chemical bonds and their types.	Introduction to Physical Chemistry - States of Matter - Derivation of the Universal Gas Law	Using the lecture method using the blackboard to explain chemical structures and reactions	Semester Exam, Daily Exam, Student Performance Evaluation, Homework
2	2 Theory, 3 Practical	Introducing students to Boyle's Law and Charles's Law – the three values of the gas constant.	Boyle's Law and Charles's Law - The Three Values of the Gas Constant	Using the lecture method using the blackboard to explain chemical structures and	

				reactions	Semester Exam, Daily Exam, Student Performance Evaluation, Homework
3	2 Theory, 3 Practical	Introducing students to molecular pressure and physical and chemical properties.	Dalton's Law of Partial Pressure	Using the lecture method using the blackboard to explain chemical structures and reactions	
4	2 Theory, 3 Practical	Introducing students to kinetic heat and thermodynamics.	Thermodynamics - Energy in Biochemistry - The Three Thermodynamic Systems - The First Law of Thermodynamics	Using the lecture method using the blackboard to explain chemical structures and reactions	
5	2 Theory, 3 Practical	Introducing students to physical enthalpy and thermodynamics.	Endothermal Content (Enthalpy) - The Second Law of Thermodynamics	Using the lecture method using the blackboard to explain chemical structures and reactions	
6	2 Theory, 3 Practical	Introducing students to the physical and chemical properties of vapor and liquid.	Liquid State - Vapor Pressure of a Liquid and Methods of Measuring It	Using the lecture method using the blackboard to explain chemical structures and reactions	
7	2 Theory, 3 Practical	Monthly Exam	Monthly Exam	Monthly Exam	
8	2 Theory, 3 Practical	Introducing students to vapor pressure and the physical properties of boiling point.	Boiling Point and Its Relationship to Vapor Pressure	Using the lecture method using the blackboard to explain chemical structures and reactions	
9	2 Theory, 3 Practical	Introducing students to how to calculate and express concentrations of substances and solutions.	Methods of Expressing Solution Concentrations - Ideal Solutions	Using the lecture method using the blackboard to explain chemical structures and reactions	
10	2	Introducing students to	Raoult's Law -	Using the	

	Theory, 3 Practical	the laws of non-ideal solutions.	Non-Ideal Solutions with Positive and Negative Skewness	lecture method using the blackboard to explain chemical structures and reactions	
11	2 Theory, 3 Practical	Introducing students to the laws of non-ideal solutions and the physical properties of vapor pressure.	Non-Ideal Solutions Containing Non-Volatile Solids - Decrease in Vapor Pressure	Using the lecture method using the blackboard to explain chemical structures and reactions	
12	2 Theory, 3 Practical	Introducing students to boiling point, freezing point depression, osmotic pressure increase, and other properties.	Elevation of Boiling Point, Depression of Freezing Point, and Increase in Osmotic Pressure	Using the lecture method using the blackboard to explain chemical structures and reactions	
13	2 Theory, 3 Practical	Introducing students to solutions of dissociated (ionized) substances and solutions of combined substances and methods for estimating them.	Solutions of Dissociated (Ionized) Substances - Solutions of Combined Substances	Using the lecture method using the blackboard to explain chemical structures and reactions	
14	2 Theory, 3 Practical	Introducing students to the physical and chemical properties of equilibrium and ionization states.	Chemical Equilibrium and Its States - Law of Mass Action - Ionic Equilibrium - Ionization of Water	Using the lecture method using the blackboard to explain chemical structures and reactions	
15	2 Theory, 3 Practical	Introducing students to the chemical properties and reaction rates of solutions.	pH - Dissociation of Weak Acids - Buffered Solutions	Using the lecture method using the blackboard to explain chemical structures and reactions	

11. Course Evaluation

:Theoretical section (30) marks
.Written exam (25) marks + coursework, reports, and classroom activities (5) marks
:Practical section (20) marks
.Written exam (15) marks + coursework, reports, and classroom activities (5) marks

12. Learning and Teaching Resources

• Physical Chemistry P.W. Atkins Physical Chemistry. Farrington Roberta, A. Daniels Alberty. Fourth Edition 1975 Physical Chemistry. Gases and Thermodynamics. AlNiajmi F.A. Dawood	• Physical Chemistry P.W. Atkins Physical Chemistry. Farrington Roberta, A. Daniels Alberty. Fourth Edition 1975 Physical Chemistry. Gases and Thermodynamics. AlNiajmi F.A. Dawood
Main references (sources)	• Physical Chemistry: Theoretical Foundations and Applications (1986). Authored by Dr. Anis Abdul-Wahhab Al-Najjar. • Physical Chemistry for the Life Sciences (1983). Translated by Dr. Mahdi Naji Al-Zakum.
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

Module Title	
Food Factories Engineering	
Module Type	
FAEN217	
Semester/Year	
2025 - 2024(Spring semester)	
Scientific Committee Approval Date	
2024 -3-2	
5- أشكال الحضور المتاحة	
حضوري	
6- عدد الساعات الدراسية (الكلي) / عدد الوحدات (الكلي)	
75 ساعة (2 نظري + 3 عملي) * 15 أسبوع	
7- اسم مسؤول المقرر الدراسي (اذا أكثر من أسم يذكر)	
الاسم: م . د صادق فنجان حسناوي م. م أنعام عبد الرضا حسين	الايميل: sadiq.fanjan@uomisan.edu.iq
8- أهداف المقرر	
Module Objectives أهداف المادة الدراسية	• Enabling the student to understand and comprehend the curriculum of laboratory engineering • Developing the study skills of students • Meeting the department's need for specialized staff in this course • Responding to the requirements of the labor market and society
9- استراتيجيات التعليم والتعلم	

1- Displaying the courses using pictures and illustrations that facilitate the student's understanding of the material. 2- Training students to conduct laboratory tests in a way that develops students' skills in this field 3- Conducting discussions and dialogues with students, which in turn enhances the student's self-confidence.	Strategy

10- بنية المقرر

Evaluation method طريقة التقييم	Learning method طريقة التعلم	Unit or topic name اسم الوحدة أو الموضوع	Required learning outcomes مخرجات التعلم المطلوبة	Number of hours الساعات	The week الاسبوع
Daily and monthly reports and exams	Theoretical lectures Practical lectures Presentation methods Discussion and dialogue	Manufacturing units and business units	operation and processing units	5	1
		Heat treatments	*Material and Energy Balance*	5	2
Daily and monthly reports and exams	Theoretical lectures Practical lectures Presentation methods Discussion and dialogue	Use of electrical energy in food and dairy factories	Heat and its transfer and control	5	3
		Heat and its transfer and control	Heat and its transfer and control	5	4
		First month exam	Evaporation	5	5
		Pumps	First month exam	5	6
		Refrigeration and freezing equipments	Heating system	5	7
		Refrigeration and freezing equipments	Pasteurization and sterilization equipments	5	8
		Food dehydration	Refrigeration and freezing equipments	5	9
		Second month exam	Pumps	5	10
		Food separation	Second month exam	5	11
		Steam boiler	Food dehydration	5	12
		Food Stirring and Mixing Units	Food separation	5	13
		Size reduction units	Grain cleaning and sorting	5	14
		Separation units in food factory	Heat exchangers	5	15

11- تقييم المقرر

توزيع الدرجة من 100 على وفق المهام المكلف بها الطالب مثل التحضير اليومي والامتحانات اليومية والشفوية والشهرية والتحريرية والتقارير .....الخ

12- مصادر التعلم والتدريس

الكتب المقررة المطلوبة (المنهجية ان وجدت)	Food Factories Engineering AL- Dhan
الكتب والمراجع الساندة التي يوصى بها (المجلات العلمية, التقارير....)	Food processing technology,fellows
المراجع الالكترونية, مواقع الانترنيت	