MODULE DESCRIPTION FORM

Module Information			
Module Title	**AGRICULTURE CAREER ETHICS**	**Module Delivery**	
Module Type	**Support or related learning activity**	☒ **Theory** ☐ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☒ **Seminar**	
Module Code	**ACE1020-AM**		
ECTS Credits	**5**		
SWL (hr/sem)	**125**		
Module Level	UGI	**Semester of Delivery**	1
Administering Department	AGME1986	**College**	AGFO1964
Module Leader	Asist. Prof. Dr. Yousif Yakoub Hilal	**e-mail**	yousif.yakoub@uomosul.edu.iq
Module Leader's Acad. Title	**Assistant Professor**	**Module Leader's Qualification**	Ph.D.
Module Tutor	N.A.	**e-mail**	N.A.
Peer Reviewer Name	N.A.	**e-mail**	N.A.
Scientific Committee Approval Date	1/9/2025	**Version Number**	1.0

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

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	1- Teaching ethics and ethical concepts to the agricultural engineer. 2- Teaching the ethical rules of professional ethics and clarifying the ethics of agricultural engineering.
Module Learning Outcomes LOs	The student should be able to: LO#1: Know general concepts of morality and moral philosophies. LO#2: Learn the concept of occupational ethics and ethical rules in the agricultural engineering profession. LO#3: Respect the laws and regulations related to agricultural engineering projects. LO#4: Bear ethical responsibilities in the fields of the agricultural engineering profession.

Module Aims, Learning Outcomes and Indicative Contents	
Indicative Contents	Indicative content includes the following. Theoretical Ethical and professional ethics, which are moral philosophies, ethical rules in agricultural engineering. It includes distributing titles on agricultural professional ethics to students to give seminars on them. Total hrs = 63 = SSWL - (Exam hrs) = 63-3 = 60 hrs (Time table hrs x 15 weeks)

Learning and Teaching Strategies	
Strategies	1. Interactive lecture, Brainstorming 2. Dialogue and discussion 3. Assigning reports 4. Quizzes 5. Presentation of examples of professional, ethical cases in the field of scientific specialization by students and received in discussion seminars.

Student Workload (SWL)			
Structured SWL (h/sem)	62	**Structured SWL (h/w)**	4
Unstructured SWL (h/sem)	63	**Unstructured SWL (h/w)**	4
Total SWL (h/sem)	**125**		

Module Evaluation

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	**Quizzes**	2	10% (10)	4 and 11	LO#1 and LO#2
	Assignments	2	10% (10)	2 and 13	LO#1 and LO#3
	Seminar	1	10% (10)	All	All
	Report	1	10% (10)	14	LO#1, LO#2 and LO#4
Summative assessment	**Midterm Exam**	2hr	10% (10)	7	LO#1, LO#2 and LO#3
	Final Exam	2hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	Introduction to professional ethics and its importance in agricultural engineering
Week 2	Basic ethical theories in the profession Integrity and scientific honesty in agricultural research

Week 3	The agricultural engineer's commitment to environmental responsibility
Week 4	Professional interaction with society and the public
Week 5	Positively dealing with conflicts of interest
Week 6	Ethics of agricultural experiments and research
Week 7	Mid-term Exam
Week 8	Ethics of agricultural experiments and research
Week 9	Confidentiality and data protection
Week 10	Compliance with laws and instructions in agricultural engineering
Week 11	Cooperation and teamwork in agricultural projects
Week 12	Combating professional corruption in agricultural engineering
Week 13	Continuous learning and self-development in an ethical context
Week 14	Assessing commitment to professional ethics: strategies and tools
Week 15	Ethics of innovation in agricultural engineering
Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly Seminar. Syllabus)	
	Material Covered
Week 1	**Pesticide use and its impact on the health of farmers and consumers**
Week 2	**Crop price manipulation: the ethics of trade in agriculture**
Week 3	**Agricultural labour exploitation: workers' rights and working conditions**
Week 4	**The impact of industrial agriculture on biodiversity: is there ethics?**
Week 5	**Unsustainable agricultural practices: responsibility to future generations**
Week 6	**Marketing genetically modified products: transparency and ethic**
Week 7	**Water management in agriculture: the right to water and fair distribution**
Week 8	**Climate change and agriculture: ethical challenges for farmers**
Week 9	**Agriculture in protected areas: a balance between protection and production**
Week 10	**Agricultural research ethics: the limits of experiments on living organisms**
Week 11	**Unfair distribution of support allocated to farmers and its impact on small projects**
Week 12	**The impact of agriculture on local communities: benefits versus risks and ethical challenges**
Week 13	**Ethics in Cash Crop (traded as international trade) Farming and its impact on Food Security**
Week 14	**Modern technologies in agriculture: are we prepared to bear their ethical consequences**
Week 15	**Organic agriculture: ethical challenges in promotion and practice**

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts	N.A.	-
Recommended Texts	Professional Ethics	Yes
Websites		

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

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

أ.م.د. يوسف يعقوب هلال
رئيس قسم المكائن والالات الزراعية

رئيس اللجنة العلمية
أ.د. عماد ك اصر مراد

MODULE DESCRIPTION FORM

Module Information					
Module Title	**DEMOCRACY and HUMAN RIGHTS**			**Module Delivery**	
Module Type	**Basic learning activities**			☒ **Theory** ☐ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**UOM1040-AM**				
ECTS Credits	**2**				
SWL (hr/sem)	**50**				
Module Level	UGI	**Semester of Delivery**		1	
Administering Department	AGME1986	**College**	AGFO1964		
Module Leader	Asist. Prof. Dr. Yousif Yakoub Hilal	**e-mail**	yousif.yakoub@uomosul.edu.iq		
Module Leader's Acad. Title	Assistant Professor	**Module Leader's Qualification**		**Ph.D.**	
Module Tutor	N.A.	**e-mail**	N.A.		
Peer Reviewer Name	N.A.	**e-mail**	N.A.		
Scientific Committee Approval Date	1/9/2025	**Version Number**	1.0		

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

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	1- Enabling the student to understand and comprehend what is related to human rights, their types, and rights in the heavenly religions. 2- Enabling the student to recognize the types of human rights and human rights according to the Iraqi Constitution in 2005. 3- Enabling the student to recognize the types and types of governments. 4- Enabling the student to learn about democratic and dictatorial governments and the concept of freedom and the rights of others.
Module Learning Outcomes LOs	The student should be able to: LO#1: Understands everything related to human rights, his rights in divine religions, and the concept of democracy. LO#2: Familiar with the types of general human rights and human rights according to the Iraqi Constitution of 2005. LO#3: Bears the national responsibility to respect human rights, opinion, and the other opinions of the nation's partners. LO#4: Respects the freedoms and rights of others.
Indicative Contents	Indicative content includes the following. Theoretical

	Enriching the student with knowledge related to human rights and their types, and their relationship to peaceful coexistence with the nation's partners, and the concept of human rights and divine religions, as well as introducing the student to the concept of governments and their types, and making him familiar with the concept of individual freedom, democracy, and human rights in accordance with the Iraqi constitution. Total hrs = 32 = SSWL - (Exam hrs) = 32-2 = 30 hrs (Time table hrs x 15 weeks)

Learning and Teaching Strategies	
Strategies	1. Interactive lecture, Brainstorming 2. Dialogue and discussion 3. Assigning reports 4. Quizzes 5. Assigning group work to reveal leadership skills

Student Workload (SWL)			
Structured SWL (h/sem)	32	**Structured SWL (h/w)**	2
Unstructured SWL (h/sem)	18	**Unstructured SWL (h/w)**	2
Total SWL (h/sem)	**50**		

Module Evaluation					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	10% (10)	4 and 11	LO#1 and LO#2
	Assignments	2	20% (20)	2 and 13	LO#1 and LO#3
	Projects / Lab.	-	-	-	-
	Report	1	10% (10)	14	LO#1, LO#2 and LO#4
Summative assessment	**Midterm Exam**	3hr	10% (10)	7	LO#1, LO#2 and LO#3
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	History of human rights
Week 2	Human rights in heavenly religions
Week 3	Forms of human rights
Week 4	New or modern human rights

Week 5	Human rights in international governmental organizations
Week 6	Human rights in non-governmental organizations, human rights in the Iraqi constitution in 2005
Week 7	Mid-term Exam
Week 8	Types of governments
Week 9	Democratic government
Week 10	Characteristics of democracy
Week 11	Pictures of democratic government
Week 12	Indirect democracy
Week 13	Types of ballots
Week 14	Procedures preliminary elections
Week 15	Types of election
Week 16	**Preparatory week before the final Exam**

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts	Human rights, written by: Hafez Alwan Hammadi Al-Dulaimi. 2010	Yes
Recommended Texts	1. Universal human rights between theory and practice, written by Jack Donnelly. 2. Human Rights, Children and Democracy, written by: Maher Saleh Allawi Al-Jubouri and others. 3. Human Rights and Public Freedoms, written by: Ramez Muhammad Ammar. 4. The Genesis of Human Rights, written by: Lynn Hunt, translated by: Fayqa Girgis Hanna. 5. The Philosophy of Human Rights, written by Ansam Amer Al-Sudani. 6. The Concept of Contemporary Democracy, written by: Ali Khalifa Al Kuwari. 7. Democracy, written by Charles Tilly, translated by: Muhammad Fadel. 8. Rooted Democracy and the Problem of Implementation, written by: Muhammad Al-Ahmari. 9. Parliamentary Governments, written by: John Stuart Mill, translated by: Emile Al-Ghouri. 10. Electoral Systems, written by: a group of authors. 11. The Genesis of Human Rights, written by: Lynn Hunt, translated by: .Fayqa Girgis Hanna 12. -The Philosophy of Human Rights, written by Ansam Amer Al .Sudani 13. Human Rights in the Western Religious Heritage and Islam, written by: Muhammad Jalaa Idris and Amal Muhammad Abd al-Rahman Rabie.	No
Websites	1- The United Nations. 2- Office of the High Commissioner, United Nations High Commissioner for Human Rights. 3- Amnesty International. 4- UNICEF. 5- International Committee of the Red Cross.	

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

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رئيس قسم المكائن والالات الزراعية

رئيس اللجنة العلمية
أ.د. عادل احمد مرار

MODULE DESCRIPTION FORM

Module Information				
Module Title	**COMPUTER1**	**Module Delivery**		
Module Type	**Basic learning activities**	☐ **Theory** ☐ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**		
Module Code	**UOM1031-AM**			
ECTS Credits	**3**			
SWL (hr/sem)	**75**			
Module Level	**UGI**	**Semester of Delivery**	1	
Administering Department	**AGME1986**	**College**	**AGFO1964**	
Module Leader	Asist. Prof. Dr. Yousif Yakoub Hilal	**e-mail**	yousif.yakoub@uomosul.edu.iq	
Module Leader's Acad. Title	Assistant Professor	**Module Leader's Qualification**	**Ph.D.**	
Module Tutor	N.A.	**e-mail**	N.A.	
Peer Reviewer Name	N.A.	**e-mail**	N.A.	
Scientific Committee Approval Date	01/09/2025	**Version Number**	1.0	

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

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	**1. Introducing students to the basics of computers, including computer components, operating systems, and essential software, as well as providing.** **2. Teaching students how to collect and analyze data using Excel or statistical analysis software, creating documents with word processors, and developing presentations.** **3. Enhancing students' online research skills and how to use electronic resources for scientific research.** **4. Utilizing computer tools to enhance communication and collaboration skills among students, such as using e-mail and online learning platforms.**
Module Learning	**LO#1:** Identify and explain the components of a computer and their basic functions. **LO#2:** Analyze agricultural data using Excel and present findings through well-organized documents and presentations.

Outcomes	**LO#3:** Evaluate the credibility of online sources when conducting scientific research. **LO#4:** Students should be able to use computer tools to enhance communication with peers, such as e-mail and online learning platforms.
Indicative Contents	Indicative content includes the following. An introduction to the computer and its components, with basic operating systems and their interfaces, will be covered. [SSWL=9 hrs] Focus on the practical use of software for data analysis (Excel), presentations (PowerPoint), and basic troubleshooting techniques to resolve common computer issues. [SSWL=24 hrs] The semester also includes an introduction to the Internet, web browsers, networks, and the basics of e-mail, as well as methods for discovering computer errors and ways to fix them. [SSWL=9 hrs] Total hrs = 47 = SSWL - (Exam hrs) = 47 - 2 = 45 hr (Time table hrs x 15 weeks)

Learning and Teaching Strategies	
Strategies	• **Practical Sessions**: Provide students with regular lab sessions where they can apply theoretical knowledge directly. Practical exercises such as creating documents, analyzing data using Excel, and troubleshooting common computer problems will enhance skill retention and understanding. • **Project-Based Learning**: Assign group projects where students must apply the tools learned (e.g., Excel, Word, PowerPoint) to solve real-world agricultural problems. For instance, they can analyze agricultural data and present their findings. This promotes collaboration, critical thinking, and problem-solving. • **Blended Learning**: Combine in-person teaching with online resources and platforms. Use e-learning tools, such as video tutorials, quizzes, and discussion forums, to provide additional support outside class. Students can learn at their own pace while reinforcing what they learn in the classroom. • **Discussion and Peer Learning**: Incorporate group discussions and peer review activities. For example, after a practical session, encourage students to present their solutions or projects to the class and give each other feedback. This fosters engagement, critical thinking, and communication skills.

Student Workload (SWL)			
Structured SWL (h/sem)	47	**Structured SWL (h/w)**	3
Unstructured SWL (h/sem)	28	**Unstructured SWL (h/w)**	1.87
Total SWL (h/sem)	75		

Module Evaluation					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	3	10% (10)	1,2, 3	LO #1
	Assignments	2	10% (10)	5 and 11	LO #1, #2
	Projects / Lab.	2	10% (10)	6 and 12	LO #1, #2

	Report	1	10% (10)	14	LO #3, #4
Summative assessment	**Midterm Exam**	2hr	10% (10)	7	LO #1, #2
	Final Exam	2hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Lab. Syllabus)	
	Material Covered
Week 1	Lab 1: **Introduction to Computer**: Concepts of Hardware and Software with their components; Concept of Computing, Data, and Information; Applications of Information Electronics and Communication Technology (IECT); Connecting input-output devices and peripherals to CPU.
Week 2	Lab 2: **Computer Components**: Computer Portions, Hardware Parts, Memory Types, Basic CPU Components, Computer Ports, Personal Computer, Personal Computer (Features and Types).
Week 3	Lab 3: **Operating System and Graphical User Interface GUI**: Operating System, Basics of Common Operating Systems, The User Interface, Using Mouse Techniques; Use of Common icons, Status Bar, Using Menu and Menu-selection, Concept of Folders and Directories, Opening and closing of different Windows; Creating Short cuts.
Week 4	Lab 4: **Word Processing**: Word Processing Basics; Opening and Closing of documents; Text creation and Manipulation; Formatting of text; Table handling: Spell check, language setting, and thesaurus.
Week 5	Lab 5: **Editing Documents**: Editing an agricultural project idea using Word, using all the program's commands and instructions, and with practical application.
Week 6	Lab 6: **Getting Started with Excel**: Formatting a Worksheet, Working with Formulas and Functions, Working with Charts.
Week 7	**Midterm Exam**
Week 8	Lab 8: **Spread Sheet**: Basics of Spreadsheet; Manipulation of cells, Formulas and Functions; Editing of Spread Sheet, printing of Spread Sheet.
Week 9	Lab 9: **Excel Program in Statistical Analysis:** Collecting Agricultural Data, Organizing Data in Excel, Basic Functions in Statistical Analysis, Creating Graphs and Charts, How to Read Statistical Results, Understandably Presenting Results.
Week 10	Lab 10: Practical Example of Analyzing Agricultural Data Using Excel.
Week 11	Lab 11: **Presentation Software**: Basics of presentation software; Creating Presentation; Preparation and Presentation of Slides; Slide Show; Taking printouts of presentation/ handouts.
Week 12	Lab 12: Create a presentation of an agricultural project idea using PowerPoint, all the program's commands and instructions, and with practical application.
Week 13	Lab 13: **Introduction to Internet and web browsers**: Basic computer networks, LAN, WAN, Concept of Internet and its applications, connecting to the Internet, world wide web, web browsing software, search engines, understanding URL, Domain name, IP Address.
Week 14	Lab 14: **Communication and E-mails**: Basics of electronic mail, getting an e-mail account, sending and receiving e-mails, accessing sent e-mails, using e-mails, and document collaboration.
Week 15	Lab 15: **Computer Troubleshooting**: Identifying and solving common hardware and software problems that computer users encounter. Basic troubleshooting techniques and tools for diagnosing and resolving issues.

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts	Computer Fundamentals and Office Applications, Ministry of	Yes

	Higher Education and Scientific Research 2013.	
Recommended Texts	N.A.	-
Websites	▪ https://www.dawliatraining.com/training-packages-single/1025 ▪ https://edu.gcfglobal.org/en/tr_ar-misc/what-is-a-computer-/1/ https://www.edraak.org/programs/course-v1:Edraak+ICDL1+2019SP/	

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

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

أ.م.د. يوسف يعقوب هلال
وليس قسم المكائن والالات الزراعية

رئيس اللجنة العلمية
أ.د. عادل احمد سرار

MODULE DESCRIPTION FORM

Module Information				
Module Title	**ENGINEERING DRAWING**	**Module Delivery**		
Module Type	Support or related learning activity	☒ **Theory** ☐ **Lecture** ☐ **Lab** ☐ **Tutorial** ☒ **Practical** ☐ **Seminar**		
Module Code	END1030-AM			
ECTS Credits	6			
SWL (hr/sem)	150			
Module Level	**UGI**	**Semester of Delivery**		1
Administering Department	AGME1986	**College**	**AGFO1964**	
Module Leader	YOUSIF YAKOUB HILAL	**e-mail**	yousif.yakoub@uomosul.edu.iq	
Module Leader's Acad. Title	**Assistant Professor**	**Module Leader's Qualification**		PhD
Module Tutor	Hussain abed hammod	**e-mail**	hu_hammod@uomosul.edu.iq	
Peer Reviewer Name	N.A.	**e-mail**	N.A.	
Scientific Committee Approval Date	1/9/2025	**Version Number**	1.0	

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

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	1. To develop the Agricultural student's ability to imagine projections and their models. 2. Exercising hand movement in engineering drawing to complete quick sketches. 3. This course deals with the theory of Orthographic Projection and the basic subject of isometric drawing. 4. To teach students engineering drawings using the AutoCAD program, which includes both theoretical lectures and labs.
Module Learning Outcomes	**LO#1:** Absorbing all the engineering characteristics of an object or a product in a clear manner. **LO#2:** Know the tools used in engineering drawing and how to use them correctly, **LO#3:** Understand and apply the basics of engineering processes. **LO#4:** Conclude projections and isometrics for each geometric figure and recognize its dimensions.
Indicative Contents	Indicative content includes the following. **Part A: Engineering Drawing Basics and Tools** • Introduction and Definition of Engineering Drawing • Engineering Drawing Tools and Their Uses •

	Explanation of Sheet Dimensions, Information Table, and Letter Writing. • Types of Lines and Basic Geometric Operations: Introduction to different types of lines (continuous, dashed, center lines) and their specific uses in drawings. Performing basic geometric operations such as measuring, dividing, and marking. • Arcs and Tangents: Defining and drawing arcs and tangents in engineering drawings, including field applications. [20 hrs.] • Classwork: Practical Applications of Previous Topics Hands-on practice applying learned techniques (lines, arcs, sheet setup) [4 hrs.] **Part B: Engineering Projections and Operations:** • Engineering Projections: Understanding projection techniques, especially orthographic projections. Learning how to project an object's views from different angles. • Mid-term Exam: Assessment covering the topics learned in Part A and initial projection skills. • Deducing the Third Projection Based on Two Projections: Skill development in visualizing and drawing the third projection when given two views of an object. [12 hrs.] • Classwork: Practical Applications of Deducing the Third Projection: Applying concepts learned in projection drawing. [4 hrs.] **Part C: Advanced Drawing Techniques and CAD Software** • Drawing Engineering Perspective (Isometric): Introduction to isometric drawing techniques. Drawing objects in isometric view for accurate 3D representation. • Review of Isometric Engineering Perspective: Revisiting the principles of isometric drawing and its application in technical drawings. Understanding the connection between isometric drawings and orthographic projections. [8 hrs.] • Introduction to Computer-Aided Drawing (CAD): Overview of computer-aided drawing, emphasizing its importance in modern engineering. Introduction to software tools like AutoCAD and SolidWorks, including their hardware components and versions. • AutoCAD Interface and Main Commands: Learning the basic interface of AutoCAD, including the drawing and modification toolbar. Explanation of key commands and their uses. • Drawing Simple Geometric Shapes Using AutoCAD: Hands-on practice with AutoCAD to draw basic geometric shapes. [12 hrs] Total hrs = 63 = SSWL - (Exam hrs) = 63 - 3 = 60 hr (Time table hrs x 15 weeks)

Learning and Teaching Strategies	
Strategies	**1. Lecture-based Teaching:** • Explaining concepts and demonstrating tools, techniques, and software in real time allows students to observe the process before applying it. **2. Hands-on Practice:** • **Lab Sessions:** Providing practical sessions where students use drawing tools and software like AutoCAD or SolidWorks to develop their skills. • **Guided Exercises:** Offering step-by-step instructions to complete tasks such as drawing isometric views or projections. **3. Interactive Class Discussions:** • **Question and Answer Sessions:** Actively engage students in discussions where they can ask questions and clarify doubts about topics like projection techniques or CAD tools. **4. Assessment and Evaluation:** • **Project-based Assessments:** Assigning projects requiring students to apply the concepts they've learned, like creating detailed engineering drawings using manual and software-based techniques.
Student Workload (SWL)	

Structured SWL (h/sem)	63	**Structured SWL (h/w)**	4
Unstructured SWL (h/sem)	87	**Unstructured SWL (h/w)**	5.8
Total SWL (h/sem)	**150**		

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

Delivery Plan (Weekly, Syllabus)	
	Material Covered
Week 1	Introduction and definition of engineering drawing
Week 2	Engineering drawing tools and their uses, knowing types of pens used, Drawing board layout.
Week 3	Explanation of sheet dimensions, information table, and letter writing
Week 4	Types of lines, their applications, and basic geometric operations
Week 5	Arcs and tangents
Week 6	Classwork: Practical applications of previous topics
Week 7	Engineering projections
Week 8	Mid-term Exam
Week 9	Deducing the third projection based on the other two
Week 10	Classwork: Practical applications of deducing the third projection
Week 11	Drawing engineering perspective (isometric)
Week 12	Review of isometric engineering perspective and its relation to deducing the third projection
Week 13	Introduction to the importance of computer-aided drawing and the types of software used for engineering drawing, such as AutoCAD and SolidWorks, including their components and versions.
Week 14	Introduction to the AutoCAD interface and main commands: (Drawing toolbar and its uses, modification toolbar and its uses).
Week 15	Drawing simple geometric shapes using AutoCAD.
Week 16	**Preparatory week before the Final Exam**

Delivery Plan (Weekly Practical Syllabus)	
	Material Covered
Week 1	Familiarization with different drawing tools, including pens, and setting up the drawing

	board layout.
Week 2	Practice drawing sheets according to standard dimensions, setting up an information table, and writing technical letters.
Week 3	Identify different line types and execute basic geometric operations (e.g., drawing straight lines, circles).
Week 4	Practice drawing arcs and tangents using drawing tools .
Week 5	Consolidate skills by applying learned techniques (lines, arcs, tangents) in a project or assignment.
Week 6	Start drawing orthographic projections of simple objects, projecting different views.
Week 7	Assessment based on skills acquired in previous weeks, focusing on projections, lines, and geometric operations.
Week 8	Visualize and draw the third projection based on two given views.
Week 9	Work on exercises that reinforce the ability to deduce the third projection, applying this to different objects.
Week 10	Learn to draw isometric projections, emphasizing proper axis alignment and scaling.
Week 11	Review and reinforce isometric drawing techniques and their connection to orthographic projections.
Week 12	Introduction to AutoCAD and SolidWorks; learning the basic interface, including drawing and modification toolbars.
Week 13	Practice using the AutoCAD interface, focusing on drawing commands (e.g., lines, circles) and modification commands (e.g., trim, extend).
Week 14	Create simple geometric drawings using AutoCAD, including 2D shapes like squares, rectangles, and circles.
Week 15	Work on exercises that reinforce the ability to Create simple geometric drawings using AutoCAD.

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts	الرسم الهندسي لطلبة كليات الزراعة، د. ناطق صبري حسن، 1990	Yes
Recommended Texts	Textbook of Engineering Drawing k. Venkata Reddy, 2008	No
Websites	-	

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

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

رئيس اللجنة العلمية
أ.د. عادل احمد حسين

أ.م.د. يوسف يعقوب هلال
رئيس قسم المكائن والالات الزراعية

MODULE DESCRIPTION FORM

Module Information

Module Title	**ENGLISH LANGUAGE 1**	**Module Delivery**	
Module Type	**Basic learning activities**		☒ **Theory** ☐ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**
Module Code	**UOM1021-AM**		
ECTS Credits	**2**		
SWL (hr/sem)	**50**		
Module Level	UGI	**Semester of Delivery**	1
Administering Department	AGME1986	**College**	AGFO1964
Module Leader	Asist. Prof. Dr. Yousif Yakoub Hilal	**e-mail**	yousif.yakoub@uomosul.edu.iq
Module Leader's Acad. Title	Assistant Professor	**Module Leader's Qualification**	Ph.D.
Module Tutor	N.A.	**e-mail**	N.A.
Peer Reviewer Name	N.A.	**e-mail**	N.A.
Scientific Committee Approval Date	1/9/2025	**Version Number**	1.0

Relation with other Modules

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

Module Aims, Learning Outcomes and Indicative Contents

Module Objectives	1- To going on studying the English language in special the scientific language. 2- Widening student mind about scientific and literature English vocabularies. 3- Helping the students to think and write in English the scientific reports.
Module Learning Outcomes LOs	The student should be able to: LO#1: Gets to know simple sentences, Present Simple, Past simple and Future. LO #2: Gets to know formation of negative sentences and questions in the present and past tense. LO#3: Expresses in writing the active and passive forms in writing scientific reports. LO#4: He chooses appropriate punctuation marks when writing scientific texts in his specialty.
Indicative Contents	Indicative content includes the following. Theoretical Enriching the student with knowledge related to the parts and types of

	speech, parsing marks and their tools, knowledge of punctuation tools, and choosing the appropriate style and verbs for preparing scientific reports in the specialty in a correct scientific manner. Total hrs = 32 = SSWL - (Exam hrs) = 32-2= 30 (Time table hrs x 15 weeks)

Learning and Teaching Strategies	
Strategies	1. Interactive lecture, Brainstorming 2. Dialogue and discussion 3. Assigning reports 4. Quizzes 5. Show examples for writing scientific reports in the correct formats.

Student Workload (SWL)			
Structured SWL (h/sem)	32	**Structured SWL (h/w)**	2
Unstructured SWL (h/sem)	18	**Unstructured SWL (h/w)**	2
Total SWL (h/sem)	**50**		

Module Evaluation

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	**Quizzes**	2	10% (10)	4 and 11	LO#1 and LO#2
	Assignments	2	20% (10)	2 and 13	LO#1 and LO#31
	Projects / Lab.	-	-	-	-
	Report	1	10% (10)	14	LO#1, LO#2 and LO#4
Summative assessment	**Midterm Exam**	2hr	10% (10)	7	LO#1, LO#2 and LO#3
	Final Exam	2hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

	Material Covered
Week 1	A Paragraph on agricultural engineering sciences

Week 2	A Paragraph on agricultural engineering sciences
Week 3	Present Simple: affirmative sentences
Week 4	Present Simple: 3rd person singular (‘s)
Week 5	Present Simple: negation and yes\no question
Week 6	Present Simple: wh-questions
Week 7	Mid-term Exam
Week 8	Review the Present Simple
Week 9	Past Simple: affirmative sentences
Week 10	Past simple: irregular verbs inflections
Week 11	Past Simple: negation and yes\no question
Week 12	Past Simple: wh-questions
Week 13	Synonyms and Antonyms
Week 14	Reviewing the passage, Present and Past Tenses, and Synonyms + Antonyms
Week 15	Writing in the active and passive voice in scientific reports
Week 16	**Preparatory week before the final Exam**

Learning and Teaching Resources

	Text	**Available in the Library?**
Required Texts	New Headway Plus/Beginner part1	Yes
Recommended Texts	Rapid Review of English Grammar 2020−2021	No
Websites		

Grading Scheme

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

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

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رئيس قسم المكائن والآلات الزراعية

رئيس اللجنة العلمية
أ.د. عادل امير

MODULE DESCRIPTION FORM

Module Information					
Module Title	**AGRICULTRAL ENGINEERING TECHNIQUES TRANSFER**			**Module Delivery**	
Module Type	**Core learning activity**			☒**Theory** ☐ **Lecture** ☐ **Lab** ☐**Tutorial** ☒**Practical** ☐**Seminar**	
Module Code	**AET1040-AM**				
ECTS Credits	**5**				
SWL (hr/sem)	**125**				
Module Level	UGI	**Semester of Delivery**		1	
Administering Department	AGME1986	**College**	**AGFO1964**		
Module Leader	Asist. Prof. Dr. Yousif Yakoub Hilal	**e-mail**	yousif.yakoub@uomosul.edu.iq		
Module Leader's Acad. Title	Assistant Professor	**Module Leader's Qualification**		**Ph.D.**	
Module Tutor	N.A.	**e-mail**	N.A.		
Peer Reviewer Name	N.A.	**e-mail**	N.A.		
Scientific Committee Approval Date	1/9/2025	**Version Number**	1.0		

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

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	1- Developing farm management among rural individuals 2- Developing a sense of responsibility towards the family and the rural community 3- Promoting positive attitudes of rural people towards agriculture, love of work, and use of modern technologies 4- Improving the marketing aspects of rural producers using modern technologies.
Module Learning Outcomes LOs	The student should be able to: LO#1: Know the general concepts of transferring agricultural engineering technologies. LO#2: Determines appropriate means to mobilize farmers in their love of work, development, and selection of agricultural engineering technologies. LO#3: Suggest appropriate technologies for agricultural engineering projects. LO#4: Bear ethical responsibilities in the areas of transferring agricultural engineering technologies.
Indicative Contents	Indicative content includes the following. Theoretical Developing the correct management skills to transfer and adopt agricultural technologies in the precise specialty and identifying appropriate means to guide the rural community to adopt modern and specialized technologies in the field of agricultural engineering, as well as identifying the types of technologies and how to employ them to develop work in the field of

	agricultural engineering sciences and methods of transferring them to society to reach high production and quality. Practical application The most important modern technologies in the field of agricultural engineering will be addressed, the most important reasons for their lack of spread will be discussed, and solutions will be put forward for adopting these technologies. Total hrs = 63 = SSWL - (Exam hrs) = 63-3= 60 (Time table hrs x 15 weeks)

Learning and Teaching Strategies	
Strategies	1. Interactive lecture, Brainstorming 2. Dialogue and discussion 3. Assigning reports 4. Quizzes 5. Show examples for writing scientific reports in the correct formats.

Student Workload (SWL)			
Structured SWL (h/sem)	63	**Structured SWL (h/w)**	4
Unstructured SWL (h/sem)	62	**Unstructured SWL (h/w)**	4
Total SWL (h/sem)	**125**		

Module Evaluation

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	**Quizzes**	2	10% (10)	4 and 11	LO#1 and LO#2
	Assignments	2	10% (10)	2 and 13	LO#1 and LO#3
	Projects/ Practical	3	10% (10)	4, 8 and 12	All
	Report	1	10% (10)	14	LO#1, LO#2 and LO#4
Summative assessment	**Midterm Exam**	3hr	10% (10)	7	LO#1, LO#2 and LO#3
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

	Material Covered
Week 1	Introduction to agricultural extension and technology transfer
Week 2	Elements of technology transfer and adoption process
Week 3	Factors that determine adoption rates and adopter categories

Week 4	Opinion leaders and agents of change
Week 5	Analyze farmers' needs
Week 6	Guidance methods (training and education methods)(
Week 7	Mid-term Exam
Week 8	Transfer of agricultural technologies: concept and methods
Week 9	Challenges facing the transfer of agricultural technologies
Week 10	Using communication and media in agricultural extension
Week 11	Innovating and adapting to modern agricultural techniques
Week 12	Evaluation and follow-up of extension and technology transfer programs
Week 13	Cooperation between agricultural extension workers and the local community
Week 14	Applications of smart technologies in agricultural extension
Week 15	Tools for measuring effectiveness in technology transfer and extension
Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly Practical Syllabus)

Reviewing modern technology and discussing the most important means of transferring and adopting it by farmers, as well as the obstacles and treatments that ensure adoption:

	Material Covered
Week 1	**Vertical Farming**: A technique that uses vertical spaces to grow crops, increasing productivity and reducing land use.
Week 2	**Smart Irrigation**: Advanced irrigation systems that rely on sensors to monitor soil moisture and distribute water efficiently.
Week 3	**Precision Agriculture**: The use of technology to analyze agricultural data and improve crop management.
Week 4	**Greenhouses**: Creating protected environments to enhance crop growth and shield them from harsh weather conditions.
Week 5	**Hydroponics**: Growing plants in a water solution instead of soil, which reduces water use.
Week 6	**Genetic Engineering**: The use of genetic engineering to develop disease-resistant and drought-tolerant crops.
Week 7	**Mobile Applications**: Tools that help farmers manage their farms, such as tracking crops and weather.
Week 8	**Agricultural Robots**: The use of robots to perform tasks such as planting and harvesting..
Week 9	**Remote Sensing Technology**: Used to monitor crop health and track changes in the agricultural environment..
Week 10	**Biological Control**: The use of living organisms to control pests and diseases instead of chemical pesticides..
Week 11	**Artificial Intelligence (AI)**: The application of AI technologies to analyze agricultural data and improve production..
Week 12	**Nanotechnology**: The use of nanomaterials to improve soil quality and enhance fertilizer effectiveness..
Week 13	**Geographic Information Systems (GIS)**: Used to analyze geographic data and improve agricultural land planning.
Week 14	**Organic Farming**: Agricultural techniques that rely on the use of natural materials instead of chemicals..
Week 15	**Drones**: Used for monitoring crops, collecting data, and spraying pesticides.

Learning and Teaching Resources

	Text	Available in the Library?
Required Texts	N.A.	-
Recommended Texts	- Al-Tanoubi, Muhammad Muhammad Omar (d) (1998), Agricultural Guidance Reference, Arab Renaissance House for Printing and Publishing, Beirut. - Ghadeeb, Ali Ahmed. The size and importance of the problems of transferring agricultural technologies from the point of view of agricultural employees and farmers of irrigated areas in Nineveh Governorate. Doctoral thesis, College of Agriculture and Forestry - University of Mosul, 2006 - Al-Jubouri, Khattab Abdullah Muhammad (2006), The adoption rate of yellow maize farmers for modern agricultural technologies and its relationship to some variables in the Hawija District in Kirkuk Governorate, Master's thesis, College of Agriculture and Forestry, University of Mosul	Yes
Websites		

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

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

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رئيس قسم المكائن والآلات الزراعية

رئيس اللجنة العلمية
أ.د. عماد ناصر مبرار

MODULE DESCRIPTION FORM

Module Information				
Module Title	**Mathematics**	**Module Delivery**		
Module Type	**Support or related learning activity**	☒ **Theory** ☐ **Lecture** ☐ **Lab** ☒ **Tutorial** ☐ **Practical** ☐ **Seminar**		
Module Code	**MAT1010-AM**			
ECTS Credits	**7**			
SWL (hr/sem)	**175**			
Module Level	UGI	**Semester of Delivery**		**1**
Administering Department	AGME1986	**College**	**AGFO1964**	
Module Leader	Asist. Prof. Dr. Yousif Yakoub Hilal	**e-mail**	yousif.yakoub@uomosul.edu.iq	
Module Leader's Acad. Title	Assistant Professor	**Module Leader's Qualification**		**Ph.D.**
Module Tutor	Shamil Mohammed Saleh Hassan	**e-mail**	Eng.sh.hassn@uomosul.edu.iq	
Peer Reviewer Name	Dr. Mohammed Hussin Ahmed Al-Mola	**e-mail**	dr.mohammedalmola@uomosul.edu.iq	
Scientific Committee Approval Date	01/09/2025	**Version Number**	**1.0**	

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

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	- To enable students to acquire proficiency in performing differential calculus operations. - In the field of calculus, the fundamental methodologies used to examine and describe functions are limits, derivatives, and integrals. - Students will use these tools to address application problems across a wide range of disciplines, including physics, biology, business, and economics.
Module Learning Outcomes	LO#1: The student uses understanding and of the basic concepts of engineering mathematics. LO#2: The student can develop his mental abilities when solving exercises. LO#3: The student can make connections with information mental abilities when solving exercises to reach a solution and benefit from it in other transactions.
Indicative Contents	Indicative content includes the following. Theory and Tutorial: The focus will be on logarithms - the natural logarithm [SSWL=4 hrs], and applications and solutions will be taken for problems in the exponential function - the

	trigonometric function - trigonometric facts - complex angles [SSWL=4 hrs], and then the focus will be on differential calculus - derivative laws - derivatives from higher orders such as the equation of the straight line (tangent and perpendicular) and the derivative of trigonometric functions and the derivative of exponential functions - derivatives of logarithmic functions with applications on the derivative (velocity and acceleration) and applications on the derivative (points of inflection) and in hours [SSWL=24 hrs], then moving on to integration calculations - integration laws - definite integration and focusing on integration methods - integration by algebraic substitution - integration by parts and integration methods - integration by partial fractions and in hours [SSWL=12 hrs], then the focus will be on important applied aspects such as finding the area under the curve - the approximate method - by integration calculations and finding the area between two curves With applications of volume of a rotating body and numerical integration Trapezoidal rule and number of hours [SSWL=16 hrs]. Total hrs = 63 = SSWL - (Exam hrs) = 63 - 3 = 60 hr (Time table hrs x 15 weeks)

Learning and Teaching Strategies	
Strategies	Quizzes, Homework, Discussion and solving exercises within the lecture, student interaction

Student Workload (SWL)			
Structured SWL (h/sem)	**63**	**Structured SWL (h/w)**	**4**
Unstructured SWL (h/sem)	**112**	**Unstructured SWL (h/w)**	**2**
Total SWL (h/sem)	**175**		

Module Evaluation					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	**2**	**10% (10)**	**6 and 9**	**LO #1, #2**
	Assignments	**2**	**10% (10)**	**3 and 10**	**All**
	Tutorial	**1**	**10% (10)**	**Continuous**	**All**
	Report	**1**	**10% (10)**	**12**	**All**
Summative assessment	**Midterm Exam**	**2hr**	**10% (10)**	**7**	**All**
	Final Exam	**3hr**	**50% (50)**	**16**	**All**
Total assessment			**100% (100 Marks)**		

Delivery Plan (Weekly Theory Syllabus)	
	Material Covered
Week 1	Logarithms and natural logarithms
Week 2	The exponential function - the trigonometric function - trigonometric facts compound angles
Week 3	Differential Calculus - Laws of Derivatives - Higher Order Derivatives

Week 4	Equation of a straight line (tangent and normal)
Week 5	Derivative of trigonometric functions
Week 6	Derivative of exponential functions - derivative of logarithmic functions
Week 7	Midterm exam
Week 8	Applications on the derivative (speed and acceleration)
Week 9	Applications to the derivative (inflection points)
Week 10	Introduction to integration calculations - laws of integration - definite integration
Week 11	Integration methods - integration by algebraic substitution - integration by Part.
Week 12	Integration methods - integration with partial fractions
Week 13	Finding the area under the curve - the approximate method - using integration Calculations
Week 14	Find the area under the curve
Week 15	Volume of solid revolution and Numerical integration
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Tutorial Syllabus)	
	Material Covered
Week 1	Solving exercises and mathematical applications in logarithms and natural logarithms
Week 2	Solving exercises and mathematical applications in the exponential function - the trigonometric function - trigonometric facts compound angles
Week 3	Solving exercises and mathematical applications in differential Calculus - Laws of Derivatives - Higher Order Derivatives
Week 4	Solving exercises and mathematical applications in equation of a straight line (tangent and normal)
Week 5	Solving exercises and mathematical applications in derivative of trigonometric functions
Week 6	Solving exercises and mathematical applications in derivative of exponential functions - derivative of logarithmic functions
Week 7	Midterm exam
Week 8	Solving exercises and mathematical applications in applications on the derivative (speed and acceleration)
Week 9	Solving exercises and mathematical applications in applications to the derivative (inflection points)
Week 10	Introduction to integration calculations - laws of integration - definite integration
Week 11	Solving exercises and mathematical applications in integration methods - integration by algebraic substitution - integration by Part.
Week 12	Solving exercises and mathematical applications in integration methods - integration with partial fractions
Week 13	Solving exercises and mathematical applications in finding the area under the curve - the approximate method - using integration Calculations
Week 14	Solving exercises and mathematical applications in find the area under the curve
Week 15	Solving exercises and mathematical applications in volume of solid revolution and Numerical integration (Trapezoidal rule)

Week 16	Preparatory week before the final Exam

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts	Mathematics for Machine Learning author M. P. Deisenroth, A. A. Faisal and C. S. Ong	No
Recommended Texts	Mathematical Handbook of Formulas and Table 1300 Math Formulas	No
Websites	https://mathblog.com/mathematics-books/	

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

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

مدرس المادة النظري

م. د. محمد حسين احمد المولى

مدرس المادة العملي

م. شامل محمد صالح حسن

رئيس اللجنة العلمية

أ. د. عادل احمد عبد الله

رئيس قسم المكائن وآلات الزراعية

أ. م. د. يوسف يعقوب هلال

Module Description

Module Information					
Module Title	Integrated pest management			**Module Delivery**	
Module Type	**Core learning activity**			☒**Theory** ☐**Lecture** ☒**Lab** ☐**Tutorial** ☐**Practical** ☐**Seminar**	
Module Code	IPM2110-AM				
ECTS Credits	5				
SWL (hr/sem)	**125**				
Module Level	UGII		**Semester of Delivery**	3	
Administering Department	AGME1986		**College**	AGFO1964	
Module Leader	Asist. Prof. Dr. Yousif Yakoub Hilal		**e-mail**	yousif.yakoub@uomosul.edu.iq	
Module Leader's Acad. Title	assistant professor		**Module Leader's Qualification**	Ph.D.	
Module Tutor	Name (if available)		**e-mail**	E-mail	
Peer Reviewer Name	Name		**e-mail**	E-mail	
Scientific Committee Approval Date	1/9/2025		**Version Number**	1.0	

Relation with other Modules			
Prerequisite module	BSS1050-AM	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	• Introducing students to the common types of pest and their effect on crops, and explaining their transmission methods and infection mechanisms. • Provide an understanding of the basic biology and ecology of pest, with an emphasis on the impact of environmental factors on their spread and development. • Students learned the skills of diagnosing caecilian infections and analyzing the factors affecting them, using laboratory tests and field observation. • Study means and methods of prevention and control of pest , including the use of pesticides and advanced agricultural techniques such as biological control. • Analyze the economic and environmental impacts ofpest, and study sustainable and

	preventive management methods to reduce their impact on crops and the environment. • Enhancing students' skills in planning and implementing field experiments and scientific studies to effectively treat and control caecilian infestations. • Encouraging students to research and interact with modern literature and research in the field ofpest, and to contribute to developing innovative solutions to meet current challenges in this field
Module Learning Outcomes	LO#1 :Understand the basic concepts of integrated management and identify examples of integrated management patterns. LO#2: Identify the types of pests LO#3:Identify the critical economic limit and the factors affecting it LO#4:Designing programs to manage major pests in our environment
Indicative Contents	1:The student is introduced to the concept of the history of Integrated pest management 2:The student explains the importance of plant pest 3:Gives examples of losses and damage caused by plant pest 4: Learn about the concept of critical economic limit and the factors affecting it 5: Learn examples of global integrated pest management programs 6: Learn examples of integrated management programs for local pests

Learning and Teaching Strategies	
LO#2:The student explains the importance of plant diseases Discuss the Strategies	- Brainstorming • Teamwork • Discussion • Discovery learning • Problem solving or problem-based learning • E-Learning • Practical field training • Think, discuss, share

Student Workload (SWL)			
Structured SWL (h/sem)	63	**Structured SWL (h/w)**	4
Unstructured SWL (h/sem)	62	**Unstructured SWL (h/w)**	4
Total SWL (h/sem)	**125**		

Module Evaluation					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	10% (10)	5 and 10	LO #2,LO #3
	Assignments	2	10% (10)	2 and 12	LO #1,LO #4
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	all
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)	
	Material Covered
Week 1	Knows the pest, its divisions, and its harms
Week 2	knows a historical overview of agricultural pests
Week 3	Number of survey methods and factors affecting the samples
Week 4	Write a report on injury estimation methods
Week 5	Write a report on agricultural pest infections
Week 6	Write a report on agricultural pest infections
Week 7	Knows the factors that must be taken into account when determining the critical economic limit
Week 8	Exam
Week 9	An Introduction to the Concept of Integrated Pest Management (IPM) for Plant Diseases.
Week 10	Methods of Resistance to Pathogens (Natural Resistance).
Week 11	The Concept of Biological (Biological) Control, Its Key Features, the Main Biological Factors in Control, and the Conditions for a Biological Agent.
Week 12	Physical Control.
Week 13	Chemical Control.
Week 14	Exam.
Week 15	Agricultural Applications in Integrated Management.
Week 16	Application of an Integrated Management Program for a Significant Disease Affecting Wheat and Barley (such as Yellow Rust) or Verticillium Wilt in Olive Trees..

Delivery Plan (Weekly Lab. Syllabus)	
	Material Covered
Week 1	Lab 1: Discuss the different definitions of management.
Week 2	Lab 2: Note the different manifestations of economic losses and damages of various pests in the field.
Week 3	Lab 3: lObserving the various manifestations of economic losses and damages of various pests in the warehouse
Week 4	Lab 4: Conducting a survey to determine the rates and levels of infection in the field in vegetable fields and seasonal crops
Week 5	Lab 5: Conducting a survey to determine the rates and levels of infection in the field in orchard fields.
Week 6	Lab 6: Visit different stores and determine the infection rates and the nature of the damage therein.
Week 7	Lab 7: Discussing reports written in the past weeks on the distribution of infections and their rates
Week 8	Lab 8:EXAM
WEEK 9	Lab 9: Discussing reports written in the past weeks on the distribution of infections and their rates
Week 10	Lab 10:Learn about some practical procedures within biological control
Week 11	Lab 11: Learn some practical procedures for chemical pest control
Week 12	Lab 12: View global programs in integrated pest management worldwide
Week 13	Lab 13: Learn about global programs to combat globally prevalent diseases.
Week 14	Lab14: Programming the available capabilities to build local insect pest control programs
Week 15	Lab 15: Programming the available capabilities to build local pest control programs
Week 16	Exam

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts	Integrated pest management	Yes
Recommended Texts	lectures.	Yes
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

Module Information					
Module Title	**DESIGN AND ANALYSIS OF EXPERIMENTS**			**Module Delivery**	
Module Type	**Core learning activity**			☒Theory ☐lecture ☐lab ☐Tutorial ☒Practical ☐Seminar	
Module Code	DAE2160-AM				
ECTS Credits	5				
SWL (hr/sem)	125				
Module Level	UGII		**Semester of Delivery**	3	
Administering Department	AGME1986		**College**	AGFO1964	
Module Leader	Asist. Prof. Dr. Yousif Yakoub Hilal		**e-mail**	yousif.yakoub@uomosul.edu.iq	
Module Leader's Acad. Title	Professor		**Module Leader's Qualification**	Ph.D	
Module Tutor	N.A.		**e-mail**	e-mail	
Peer Reviewer Name	N.A.		**e-mail**	E-mail	
Scientific Committee Approval Date	1/9/2025		**Version Number**	1.0	

Relation with other Modules			
Prerequisite module	AGS1060-AM	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	Enable the student to learn how to design experiments in the agricultural field in general and animal production in particular and understand and apply all laws related to analysis processes and testing results and choose the appropriate design for the experiment, how to distribute the parameters to the experimental units, and record the observations to be able to collect data, classify and analyze it, conduct a significance test.
Module Learning Outcomes	The student should be able to: **LO#1: Learn and comment on basic statistical topics and analysis** **LO#2: Statistical package learns data entry .** **LO#3: Performs statistical analyzes and interprets the results** **LO#4: Student Performs statistical analyses and comments**

Indicative Contents	Indicative content includes the following. Theoretical Enabling the student to learn how to read practical research data and analyze it well, and to understand how electronic statistical analysis programs such as SAS and SPSS work, Total hrs = 63= SSWL - (Exam hrs) = 63-3= 60 (Time table 4hrs x 15 weeks)

Learning and Teaching Strategies	
Strategies	1. Interactive lecture, Brainstorming 2. Dialogue and discussion 3. Assigning reports 4. Quizzes 5. Show examples for writing scentific reports in the correct formats ..

Student Workload (SWL)			
Structured SWL (h/sem)	63	**Structured SWL (h/w)**	4
Unstructured SWL (h/sem)	62	**Unstructured SWL (h/w)**	1
Total SWL (h/sem)	**125**		

Module Evaluation					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	10% (10)	5 and 10	LO #1,LO #3
	Assignments	2	10% (10)	2 and 12	LO #1,LO #4
	Projects/Lab	-	-	-	-
	Report	1	10% (10)	13	all
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)	
	Material Covered
Week 1	Some statistical measures
Week 2	Chapter One (Introduction)
Week 3	Completely randomized design

Week 4	Comparing between averages
Week 5	Comparing between averages
Week 6	Some of Mistakes that Researcher may be do it in experiments.
Week 7	Randomized complete block design
Week 8	Mid-Term Exam.
Week 9	Randomized complete block design (relative efficiency comparing with Complete Randomize Design), estimating missing observation.
Week 10	Latin square design
Week 11	Latin square design (relative efficiency comparing with another two Designs [RCBD, and CRD])
Week 12	Latin square design (estimating the missing observation)
Week 13	Factorial experiments
Week 14	Factorial experiments
Week 15	Scientific visit
Week 16	Term Exams .

Delivery Plan (Weekly Lab. Syllabus)	
	Material Covered
Week 1	Measures of concentration and measures of dispersion
Week 2	Completely randomized design (C.R.D.) solving method
Week 3	Completely randomized design (C.R.D.) some indirect questions and give homewok
Week 4	Dunnett test, least significant difference l.s.d.
Week 5	Duncan Multiple Range Test
Week 6	Some of General Mistakes that may be the researcher do it.
Week 7	completely randomized block design direct
Week8	completely randomized block design in direct
Week9	Relative efficiency and missing observations in a completely randomized block design
Week10	Direct questions in Latin square design
Week11	Indirect questions in the Latin square design
Week12	Relative efficiency of the Latin square design
Week13	missing observations in a Latin square design
Week14	Factorial experiments
Week15	Factorial experiments
Week16	Final practical test

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts	Design and Analysis of Agricultural Experiments Authored by: Dr. Khasha' Al-Rawi and Dr. Abdulaziz Muhammad	Yes
Recommended Texts	Some lectures published on the college website	Yes
Websites	Websites specialized in Statistics and Data Analysis .	

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.

أ.م.د. يوسف يعقوب هلال
رئيس قسم المكائن والآلات الزراعية

رئيس اللجنة العلمية
أ.د. عادل اصبر مرار

MODULE DESCRIPTION

Module Information					
Module Title	**FOOD TECHNOLOGIES and HEALTH AGRICULTRAL PRODUCTS**			**Module Delivery**	
Module Type	**Core learning activity**			☒ **Theory** ☐ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	FTP2150-AM				
ECTS Credits	**5**				
SWL (hr/sem)	**125**				
Module Level	UGII	**Semester of Delivery**		3	
Administering Department	AGME1986	**College**	**AGFO1964**		
Module Leader	Asist. Prof. Dr. Yousif Yakoub Hilal	**e-mail**	yousif.yakoub@uomosul.edu.iq		
Module Leader's Acad. Title	Assistant Professor	**Module Leader's Qualification**		**Ph.D.**	
Module Tutor	N.A.	**e-mail**	N.A.		
Peer Reviewer Name	N.A.	**e-mail**	N.A.		
Scientific Committee Approval Date	1/9/2025	**Version Number**	1.0		

Relation with other Modules			
Prerequisite module	BSS1050-AM	**Semester**	2
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	1- **To provide students with the fundamental concepts of food technology and its role in reducing agricultural losses and achieving food security.** 2- **To enable students to understand the impact of preservation and processing techniques on the quality and safety of agricultural and animal products within the framework of good agricultural practices.** 3- **To introduce students to the factors affecting the health and safety of food products, including genetic modification, pesticide residues, and relevant regulations.** 4- **To raise awareness of the importance of sustainable development in managing natural resources, protecting the environment, and ensuring the continuity of the food supply chain.**
Module Learning Outcomes LOs	**By the end of this course, the student will be able to:** **LO#1:** Explain the fundamental concepts of food technology, including food processing and preservation methods, and their role in achieving food security and sustainable development.

	LO#2: Evaluate the quality of agricultural and animal products, analyze sources of contamination, and propose solutions within the framework of good agricultural practices (GAP). **LO#3:** Distinguish between food safety regulations and standards, and apply them in analyzing the production chain to ensure consumer safety. **LO#4:** Demonstrate ethical and professional responsibility toward community health and environmental protection through the adoption of sustainable and safe food production practices.
Indicative Contents	The guidance content includes the following: **Guidance Content (Theoretical):** Introduce students to the fundamentals of food technology and its role in food security, explain how processing and preservation techniques affect product quality and safety, and reinforce concepts of sustainability and health regulations. **Guidance Content (Practical):** Simple applications of food processing techniques, with analysis of barriers to their adoption in local communities and proposing feasible solutions. Total hrs = 63 = SSWL - (Exam hrs) = 63-3= 60 (Time table4 hrs x 15 weeks)

Learning and Teaching Strategies

Strategies	1- **Interactive Lecture and Brainstorming** 2- **Dialogue and Discussion** 3- **Case Study** 4- **In-Class Experiments** 5- **Mini Field Visits (Real or Virtual)**

Student Workload (SWL)

الحمل الدراسي المنتظم للطالب خلال الفصل	63	الحمل الدراسي المنتظم للطالب أسبوعيا	4
الحمل الدراسي غير المنتظم للطالب خلال الفصل	62	الحمل الدراسي غير المنتظم للطالب أسبوعيا	4
الحمل الدراسي الكلي للطالب خلال الفصل	**125**		

Module Evaluation

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	**Quizzes**	2	10% (10)	4 and 11	LO#1 and LO#2
	Assignments	2	10% (10)	2 and 13	LO#1 and LO#3
	Projects/ Practical	3	10% (10)	4, 8 and 12	All

	Report	1	10% (10)	14	LO#1, LO#2 and LO#4
Summative assessment	**Midterm Exam**	3hr	10% (10)	7	LO#1, LO#2 and LO#3
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

	Material Covered
Week 1	Introduction to Food Technology and its objectives. The role of food processing in reducing post-harvest losses and achieving food security. Concepts of Sustainable Development in the agricultural and food sectors.
Week 2	Traditional and modern food preservation methods (drying, canning, refrigeration, smart packaging). Impact of preservation techniques on the sustainability of natural resources and product quality.
Week 3	Food processing technologies for field crops (grains, legumes) with a focus on sustainability and loss reduction. Extraction of vegetable oils and techniques for improving production efficiency.
Week 4	Processing horticultural products (fruits and vegetables): canning, juices, jams. The relationship between horticultural product quality and food security.
Week 5	Dairy and meat technology: preservation, processing, sustainable practices. Management of animal industrial waste according to environmental sustainability standards.
Week 6	Modern technologies in food industries (smart packaging, functional foods). The impact of the food industry on Sustainable Development Goals (SDGs).
Week 7	Mid-term Exam
Week 8	Introduction to the health and safety of food products (plant and animal origin). Regulations and standards to ensure food safety.
Week 9	Safety of animal products (dairy, meat, eggs): sources of contamination, zoonotic diseases. Management of animal supply chains within the framework of environmental and health sustainability.
Week 10	Safety of plant products: chemical and biological contamination (pesticides, fungi, mycotoxins). Good Agricultural Practices (GAP) to achieve sustainable quality and safety of agricultural products.
Week 11	Genetic modification (GMOs) in agricultural crops: objectives, risks, opportunities. The relationship between biotechnology and achieving food security within sustainability frameworks.
Week 12	Quality management of horticultural products from farm to consumer. Applications of modern technologies in monitoring the health of plant products.
Week 13	The concept of agricultural protection as an entry point to ensure the quality and safety of agricultural products. Impact of Integrated Pest Management (IPM) on reducing pesticide residues in products. How sound preventive practices help maintain product characteristics (color, texture, flavor, and absence of contaminants).
Week 14	Types of agricultural pesticides and their direct effects on product quality. Methods to reduce pesticide residues in food products (washing, thermal treatments,

	biotechnological techniques). Regulations and controls to limit pesticide residues in foods (standards, Good Agricultural Practices - GAP). The relationship between environmental sustainability and food product safety in pesticide use.
Week 15	Managing natural resources (water, soil, energy) to ensure healthy and safe agricultural products. The impact of sustainability in agricultural practices on food product health (low-impact technologies). Sustainable food security: the relationship between (product health – environmental protection – resource conservation). Practical examples (International projects, case studies from Iraq).
Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly Practical Syllabus)

	Material Covered
Week 1	Introductory tour of the food laboratory (or theoretical explanation supported by images/videos) + discussion of basic practical skills
Week 2	Food preservation experiment using drying (with local vegetables or fruits)
Week 3	Preservation using salt or sugar (making jam or pickles)
Week 4	Oil extraction from sesame seeds (preparing tahini)
Week 5	Sensory evaluation of natural juice or preserved horticultural product
Week 6	Inspection of preserved meat or dairy products (sensory analysis + spoilage signs)
Week 7	Hands-on application: reading nutrition labels and health data of canned food products
Week 8	Visual inspection and analysis of contamination residues in a plant-based product (comparing market samples)
Week 9	Case study on a genetically modified product (video presentation or booklet + scientific discussion)
Week 10	Educational field visit to a food or dairy factory
Week 11	Theoretical and practical classification of spoilage types in plant and animal food products
Week 12	Interactive assessment: linking preservation methods to environmental impact (sustainability perspective)
Week 13	Practical model of quality control in the production chain (from farm to consumer)
Week 14	Student mini-project presentations (e.g., idea for a safe food product + packaging design)
Week 15	Final practical exam + self-assessment of the practical course

Learning and Teaching Resources

	Text	**Available in the Library?**
Required Texts	N.A.	-
Recommended Texts	- *Principles of Food Industries* - Food Safety – Printed Lectures	Yes
Websites		

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

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

أ.م.د. يوسف يعقوب هلال
وليس قسم المكائن والالات الزراعية

رئيس اللجنة العلمية
أ.د. عادل احمد مبارك

Course Description Form

Course information					
Module Title	**agricultural production technology**			**Module Delivery**	
Module Type	**Core learning activity**			☒ **Theory** ☐ **Lecture** ☐ **Lab** ☐ **Tutorial** ☒ **Practical** ☐ **Seminar**	
Module Code	APT2140-AM				
ECTS Credits	**5**				
SWL (hr / sem)	**125**				
Module Level	UGII	**Semester of Delivery**		3	
Administration Department	AGME1986	**College**	**AGFO1964**		
Module Leader	Asist. Prof. Dr. Yousif Yakoub Hilal	**e-mail**	yousif.yakoub@uomosul.edu.iq		
Module Leader's Acad. Title	Assistant Professor	**Module Leader's Qualification**		**Ph.D.**	
Module Tutor	NA	**e-mail**	NA		
Peer Reviewer Name	NA	**e-mail**	NA		
Scientific Committee Approval Date	1/9/2025	**Version Number**	1.0		

with other subjects Relationship			
Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Course objectives, learning outcomes, and guiding content	
Course objectives	1- Introducing the basic concepts and principles underlying agricultural animal husbandry techniques and methods to improve productivity, and instilling values of ethical and safe handling of animals to ensure the safety and health of . consumers 2. Introduce students to the types of farm animals and their classification. Enhance students' skills in field operations related to farm animals and problem-solving in the field of animal production. 3-pes of Providing the student with basic knowledge in horticulture and ty horticultural plants, including fruits, vegetables, and ornamental plants, as well as soil preparation, modern irrigation techniques, and pest and disease control, .enabling him to understand all stages of production 4-plant nutrition and focuses on modern techniques such It includes the basics of harvest operations and marketing, -as hydroponics, protected agriculture, post .giving the student a comprehensive view of the production process

Learning outcomes for the subject	: be able to The student will LO#1 Identify the types of economic animals and their production stages and cycles, and : . develop and apply the cognitive and emotional abilities related to animal production LO#2 Acquire practical skills in establishing and managing fields, caring for animals :, and handling production records, using modern technologies. LO#3 Identify the basics of plant production, starting with soil characteristics and : progressing to mastering methods of propagation and plant plant nutrition, and .care LO#4 harvest -post Gain skills for production from farm to market and understand : . and marketing processes to ensure crop quality and economic value
Guidance contents	. : The guidance content includes theoretical to the economic importance of livestock, animal species and Introducing students classification, and field, administrative, and technical operations on animal farms, agricultural engineers capable of dealing with the aim of preparing specialized . with animal production problems using modern technologies It provides the student with a comprehensive view of all stages of plant nt production, from soil preparation, irrigation techniques, modern agriculture, pla plant management. Harvest-propagation, plant care, and post

Learning and teaching strategies	
Strategies	,Interactive lecture .1brainstorming Dialogue and .2discussion Case .3study Classroom .4experiments visits-Mini .5, .real or virtual

.weeks The student's academic load is calculated as 15			
Regular student load during the semester	63	Regular weekly student workload	4
Irregular student load during the semester	62	Irregular student study load per week	4
The student's total academic load during the semester	**125**		

Course material evaluation

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	**Quizzes**	2	10% (10)	4 and 11	LO#1 and LO#2
	Assignments	2	10% (10)	2 and 13	LO#1 and LO#3
	Projects/ Practical	3	10% (10)	5, 10and 14	All
	Report	1	10% (10)	14	LO#1, LO#2 and LO#4
Summative assessment	**Midterm Exam**	3 hours	10% (10)	7	LO#1, LO#2 and LO#3
	Final Exam	3 hours	50% (50)	16	All
Total assessment			100% (100 Marks)		

curriculum Theoretical weekly

	Material Covered
Week 1	Definition of horticulture, its importance, and its main :Horticultural Plant Production Basics of (divisions (vegetables, fruits, ornamental plants
Week 2	types of greenhouses, and , of protected agriculture The importance modern agricultural techniques the concept and types of hydroponics
Week 3	Methods of plant propagation: sexual propagation, vegetative propagation, and tissue .culture
Week 4	pruning and appropriate times Pruning trees and plants, pruning objectives, types of
Week 5	Pests and diseases, their control, harvesting and marketing of horticultural products
Week 6	Definition of field crops, types of field crops, divisions of field crop science, importance of field crops .food security in providing
Week 7	Environmental factors in Iraq and the world and their relationship to the growth of field crops, .location and surface, climate, soil, water resources Mid-term Exam
Week 8	.Classification of field crops, according to life cycle
Week 9	.Major crops in the world and Iraq
Week 10	modern methods of field crop management , Agricultural rotations
Week 11	The economic importance of livestock, challenges and future prospects for expanding production
Week 12	purpose cows, Iraqi cows and calf breeding-beef cows, dual ,Cattle types, dairy cows
Week 13	Global and local sheep and goat breeds, as well as methods of establishing sheep flocks.
Week 14	.farms Poultry, its economic importance, and the conditions for establishing and types of poultry Classification of chicken breeds
Week 15	Buffalo, general characteristics of buffalo and types of buffalo
Week 16	**Preparatory week before the final exam**

for practical application Weekly curriculum	
	Material Covered
Week 1	the horticultural facilities and learning about the horticultural facilities Field visit to
Week 2	.Learn about basic tools and equipment and prepare suitable soil mixes for planting
Week 3	Practical application of plant propagation methods, planting seeds and cuttings
Week 4	Carry out pruning of some plants and trees and identify the objectives of each type of pruning
Week 5	Determine the maturity signs of some crops, such as tomatoes or cucumbers, and .harvest the crop
Week 6	– harvesting – irrigation – pest control – seeding – Crop service operations (land preparation (harvest operations-post
Week 7	**crops** Botanical description of the most important field
Week 8	.Design of agricultural rotations and their types
Week 9	methods of field crop management and the use of smart agriculture Modern
Week 10	.How to deal with climate change in field crop production
Week 11	Field operations in livestock farms
Week 12	Milking, milking methods
Week 13	Suckling, caring for young animals, and weaning methods.
Week 14	Animal housing and construction methods
Week 15	Types of records, methods of organizing, and their importance in managing production projects

Learning and teaching resources		
	Text	**Available in the Library?**
Required Texts	NA	-
Recommended Texts	- Principles of Animal Production - Principles of gardening - Theoretical :Fundamentals of Field Crop Production and Practical	yes
Websites		

Grading scheme				
Group		Appreciation	**Marks %**	**Definition**
Success Group (50 - 100)		privilege	90 - 100	Outstanding Performance
		very good	80 - 89	Above average with some errors
		good	70 - 79	Sound works with notable errors
		middle	60 - 69	Fair but with major shortcomings
		acceptable	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)		in) Precipitate (process	(45-49)	More work required but credit awarded
		Failed	(0-44)	Considerable amount of work required

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

أ. م. د. يوسف يعقوب هلال
رئيس قسم المكائن والآلات الزراعية

رئيس اللجنة العلمية
أ.د. عادل احمد مراد

Module Description

Module Information					
Module Title	**CRIMES of the BAATH REGIME in IRAQ**			**Module Delivery**	
Module Type	**Basic learning activities**			☒ **Theory** ☐ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**UOM2050-AM**				
ECTS Credits	**2**				
SWL (hr/sem)	**50**				
Module Level	UGII	**Semester of Delivery**		3	
Administering Department	AGME1986	**College**	AGFO1964		
Module Leader	Asist. Prof. Dr. Yousif Yakoub Hilal	**e-mail**	yousif.yakoub@uomosul.edu.iq		
Module Leader's Acad. Title	**Assistant Professor**	**Module Leader's Qualification**		Ph.D.	
Module Tutor	N.A.	**e-mail**	N.A.		
Peer Reviewer Name	N.A.	**e-mail**	N.A.		
Scientific Committee Approval Date	1/9/2025	**Version Number**		1.0	

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

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives أهداف المادة الدراسية	1. The learner will understand what a crime is and its types. 2. The learner will be able to explain and clarify the crimes committed by the Ba'ath regime in Iraq. 3. The students will be familiar with international and local laws criminalizing the actions of the Ba'ath regime in Iraq. 4. The student will understand the extent of the crimes committed by the Ba'ath regime in Iraq by highlighting these crimes. 5. The learner will be able to provide examples of these crimes and the locations where they occurred. 6. The learner will understand the psychological and social effects of the crimes committed by the Ba'ath regime on the personality of the Iraqi citizen. 7. The learner will understand the environmental effects of the crimes committed by the Ba'ath regime on the Iraqi environment. 8.The learner will identify the graves left behind by the former Ba'ath regime, identifying their location and time of occurrence.
Module Learning	The student should be able to:

Outcomes LOs مخرجات التعلم للمادة الدراسية	LO#1: Understanding and identifying crimes LO#2: Understanding the dimensions and effects of crimes LO#3: Legal framework for crimes LO#4: Documenting crimes
Indicative Contents	Indicative content includes the following. Theoretical Enriching students' knowledge about understanding crime and its types, with a focus on the crimes committed by the Ba'ath regime in Iraq. Delving into the extent of the crimes committed by the regime, providing examples and identifying the locations of their occurrences, and understanding their psychological, social, and environmental impacts. It also explores local and international laws criminalizing these acts, identifying mass graves left behind by the regime, and identifying their locations and times Total hrs = 32 = SSWL - (Exam hrs) = 32-2 = 30 hrs (Time table 2hrs x 15 weeks)
Learning and Teaching Strategies	
Strategies	1. Interactive lecture, Brainstorming 2. Dialogue and discussion 3. Assigning reports 4. Quizzes 5. Assigning group work to reveal leadership skills

Student Workload (SWL)			
Structured SWL (h/sem)	32	**Structured SWL (h/w)**	2
Unstructured SWL (h/sem)	18	**Unstructured SWL (h/w)**	2
Total SWL (h/sem)	**50**		

Module Evaluation					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	10% (10)	4 and 11	LO#1 and LO#2
	Assignments	2	20% (20)	2 and 13	LO#1 and LO#3
	Projects / Lab.	-	-	-	-
	Report	1	10% (10)	14	LO#1, LO#2 and LO#4
Summative assessment	**Midterm Exam**	2hr	10% (10)	7	LO#1, LO#2 and LO#3
	Final Exam	2hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

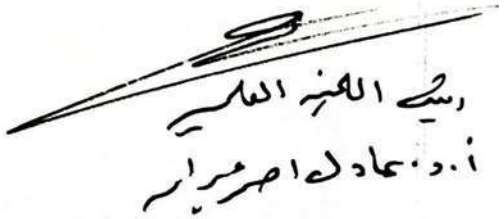
Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	The Concept of Crimes and Their Categories

Week 2	Crimes of the Ba'ath Regime According to the Documentation of the Iraqi Criminal Court Law of 2005
Week 3	Militarization of Society
Week 4	The Ba'ath Regime's Position on Religion and Its Violations of Iraqi Law
Week 5	Some Decisions Concerning Political and Military Violations of the Former Ba'ath Regime
Week 6	Prison and Detention Facilities of the Ba'ath Regime in Iraq
Week 7	Mid-term Exam
Week 8	Environmental Crimes of the Ba'ath Regime
Week 9	1. War and Radioactive Pollution and Mine Explosions 2. Destruction of Cities and Villages (Scorched Earth Policy)
Week 10	Draining the Marshes in Southern Iraq Destroying Orchards, Palm Trees, Trees, and Crops
Week 11	Mass Grave Crimes ,The Events of 1963 and Their Relationship to Mass Graves
Week 12	1- The Events of 1979 to 1988 and Their Relationship to Mass Graves 2- The Events of 1987 to 1988 and Their Relationship to Mass Graves
Week 13	The Events of the 1991 Sha'ban Uprising and Their Relationship to Mass Graves
Week 14	Chronological Classification of Mass Graves and Genocide in Iraq 1963 to 2003
Week 15	1: Mass Graves Against the Kurds 1983 2: The Anfal Massacre 1987-1988 3: Graves of the Sha'ban Uprising in Iraq 1991
Week 16	**Preparatory week before the final Exam**

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts	Crimes of the Ba'ath Regime in Iraq, 2023	Yes
Recommended Texts	1-Ihsan Hindi, Military Occupation. 2- Jundi Abdulmalik, Criminal Encyclopedia. 3- Mass Graves in Iraq, by Human Rights Watch. 4- Journal of Human Rights and Public Liberties. 5- Antonio Cassese, International Criminal Law.	No
Websites	https://iraqicenter-fdec.org/archives/5146	

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

Module Information					
Module Title	**ARABIC LANGUAGE 2**			**Module Delivery**	
Module Type	**Basic learning activities**			☒Theory ☐Lecture ☐Lab ☐Tutorial ☐Practical ☐Seminar	
Module Code	UOM1012-AM				
ECTS Credits	**2**				
SWL (hr/sem)	**50**				
Module Level	UGII		**Semester of Delivery**	3	
Administering Department	AGME1986		**College**	AGFO1964	
Module Leader	Asist. Prof. Dr. Yousif Yakoub Hilal		**e-mail**	yousif.yakoub@uomosul.edu.iq	
Module Leader's Acad. Title	**Assistant Professor**		**Module Leader's Qualification**	**Ph.D.**	
Module Tutor	N.A.		**e-mail**	N.A.	
Peer Reviewer Name	N.A.		**e-mail**	N.A.	
Scientific Committee Approval Date	1/9/2025		**Version Number**	1.0	

Relation with other Modules			
Prerequisite module	UOM1011	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	1. Introducing students to the basics of the Arabic language. Also breaking the barrier of shyness and increasing their confidence inside and outside the classroom. 2. Engaging them in short discussions where they can write or express themselves orally. 3. Improving their reading, writing, listening and speaking skills as students, and strengthening students' literary ability to appreciate the styles of the language and realize its beauty.
Module Learning Outcomes	The student should be able to: LO#1: Create a full awareness of the correct use of Arabic grammar in writing and speaking. LO#2: Students will improve their ability to speak Arabic in terms of fluency and comprehension. LO#3: Students will review the grammatical forms of Arabic and use these forms in specific communicative contexts, which include: classroom activities, homework, reading texts, and writing. LO#4: Students will enhance their ability to write short paragraphs and summaries .using a process approach

Indicative Contents	Indicative content includes the following. Theoretical Introduction to communication in general and the Arabic language in particular, with an introduction to word categories (parts of speech) in Arabic {4 hours}. Explanation of each part of speech in Arabic such as nouns, pronouns, verbs, adjectives, adverbs, prepositions, conjunctions and conjunctions {16 hours}. Basic skills in learning Arabic: reading and writing are gradually introduced over the past weeks {6 hours}. The last part is dedicated to some error correction and feedback sessions {4 hours}. -Total hrs = 32 = SSWL - (Exam hrs) = 32 - 2 = 30 hr (Time table2 hrs x 15 weeks)

Learning and Teaching Strategies	
Strategies	1. Interactive lecture, Brainstorming 2. Dialogue and discussion 3. Assigning reports 4. Quizzes 5. Show examples for writing scientific reports in the correct formats.

Student Workload (SWL)			
Structured SWL (h/sem)	32	**Structured SWL (h/w)**	2
Unstructured SWL (h/sem)	18	**Unstructured SWL (h/w)**	1
Total SWL (h/sem)	50		

Module Evaluation

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	**Quizzes**	3	15% (15)	4,6,9	LO#1, LO#3
	Home Assignments	2	10% (10)	2 and 12	LO#1, LO#4
	Collage Assignments	1	5% (5)	10 and 11	LO#2
	Report	1	10% (10)	13	LO#4
Summative assessment	**Midterm Exam**	2hr	10% (10)	7	LO#1
	Final Exam	2hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

	Material Covered
Week 1	Arabic Language / Word Types and Definitions
Week 2	Pronouncing the Hamzat al-Qat' and al-Wasl
Week 3	Rules for Writing the Hamza
Week 4	Writing the Ta' at the End of a Word
Week 5	How to Look Up Words in Arabic Dictionaries
Week 6	Constructed and Inflected Words and Original and Secondary Inflectional Marks

Week 7	midterm exam
Week 8	Nominal Sentences and Punctuation
Week 9	Verbs of Approximation, Hope, and Initiation
Week 10	Number Rules in terms of Syntax and Structure, and in terms of Definiteness and Indefiniteness
Week 11	Linguistic Errors
Week 12	Defective Verbs
Week 13	Pronunciation and Writing of the Letters Ḍād and Ḍād
Week 14	Morphological Variation
Week 15	Poetry and Its Types
Week 16	Preparing the student for the final exam.

Learning and Teaching Resources

	Text	Available in the Library?
Required Texts	Comprehensive Grammar - Abbas Hassan	No
Recommended Texts	Simplified Grammar, by Sheikh Adham Al-Asami	No
Websites	-	

Grading Scheme

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

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

أ.م.د. يوسف يعقوب هلال
رئيس قسم المكائن والالات الزراعية

رئيس اللجنة العلمية
أ.د. عادل اصرمرام

MODULE DESCRIPTION FORM

Module Information					
Module Title	General Mechanics Engineering			**Module Delivery**	
Module Type	**Basic learning activity**			☒ **Theory** ☐ **Lecture** ☐ **Lab** ☒ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	GME3530-AM				
ECTS Credits	**6**				
SWL (hr/sem)	**150**				
Module Level	UGII		**Semester of Delivery**	3	
Administering Department	AGME1986		**College**	AGFO1964	
Module Leader	Yousif Yakoub Hilal		**e-mail**	yousif.yakoub@uomosul.edu.iq	
Module Leader's Acad. Title	Assistant Professor		**Module Leader's Qualification**	Ph.D.	
Module Tutor	Firas Salah Yahya		**e-mail**	Firas.alkhayatt@uomosul.edu.iq	
Peer Reviewer Name	N.A.		**e-mail**	N.A.	
Scientific Committee Approval Date	1 / 9 / 2025		**Version Number**	1.0	

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

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	- The student's familiarity with states of rest and the forces affecting bodies, through which he will have a broad understanding of the balance of bodies in a state of rest, and also, The student's familiarity with the different states of motion of bodies and their various applications in order to gain a broad understanding of the movement of agricultural equipment and machinery.
Module Learning Outcomes	Important: Write at least 6 Learning Outcomes, better to be equal to the number of study weeks. 1. Remember and understand the basics of engineering mechanics and methods of forces analysis. 2. Understand moments and couples on bodies. 3. Understand equilibrium of rigid bodies. 4. Understand friction. 5. Remembers and understands the basics of dynamics and understand

	Kinematics: rectilinear motion of bodies. 6. Understand general curvilinear motion. 7. Understand rotation of bodies about fixed axis 8. Understand Kinetics of a particle: force and acceleration.
Indicative Contents	Indicative content includes the following. Chapter 1: Introduction to engineering mechanics, forces analysis by using vector and scalar methods [SSWL=12 hrs] Chapter 2: Moments and couples. [SSWL=4 hrs] Chapter 3: Equilibrium of rigid bodies. [SSWL=4 hrs] Chapter 4: Friction. [SSWL=4 hrs] Chapter 5: Introduction to dynamics and Kinematic: rectilinear motion of bodies. [SSWL=8 hrs] Chapter 6: General Curvilinear motion of bodies, curvilinear motion using Cartesian coordinate, curvilinear motion using normal and tangential coordinates. [SSWL=12 hrs] Chapter 7: Rotation of bodies about fixed axis. [SSWL=4 hrs] Chapter 8: Kinetics of a particle: force and acceleration. [SSWL=8 hrs]

Learning and Teaching Strategies	
Strategies	- **Lecture-based Teaching:** Explaining concepts then solve illustrated examples that achieves with student interaction and discussion. - **Tutorial Teaching:** Solve problems related to the theory lecture topic that achieves with student interaction and discussion, after solve or try to solve these problems by students as homework.

Student Workload (SWL)			
Structured SWL (h/sem)	63	**Structured SWL (h/w)**	4
Unstructured SWL (h/sem)	87	**Unstructured SWL (h/w)**	4
Total SWL (h/sem)	**150**		

Module Evaluation

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	4, 10	1, 5
	Online Assignments	10	10% (10)	2,3,4,5,6,8,9, 11,12,13,14,15	All
	Onsite Assignments	2	10% (10)	6, 13	2, 3, 6
	Report	1	10% (10)	6	1
Summative assessment	Midterm Exam	2hr	10% (10)	7	1, 2, 3, 4,
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

	Material Covered
Week 1	Introduction to engineering mechanics
Week 2	Forces analysis by using vector method
Week 3	Forces analysis by using scalar method
Week 4	Moments and couples
Week 5	Equilibrium of rigid bodies
Week 6	Friction
Week 7	Mid-term Exam
Week 8	Introduction to dynamics and Kinematic: Rectilinear motion of bodies with variable acceleration
Week 9	Rectilinear motion of bodies with constant acceleration
Week 10	General curvilinear motion of bodies
Week 11	Curvilinear motion using Cartesian coordinate
Week 12	Curvilinear motion using normal and tangential coordinates
Week 13	Rotation of bodies about fixed axis
Week 14	Kinetics of a particle: force and acceleration using Cartesian coordinate
Week 15	Kinetics of a particle: force and acceleration using normal and tangential coordinates

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts	مبادئ ميكانيك، سعد الدين محمد امين، الطبعة الاولى، دار الكتب للطباعة والنشر- الموصل ، 1991	Yes
Recommended Texts	- Engineering Mechanics-Statics, R.C.Hibbeler, 13th ed., Pearson Prentice Hall, 2013. - Engineering Mechanics-Dynamics, R.C.Hibbeler, 12 ed., Pearson Prentice Hall, 2010. - Vector Mechanics for Engineers, by Beer,Johnstton, Mazurek, and Cornwell, 10th ed., McGraw-Hill, 2013.	No
Websites		

Delivery Plan (Weekly Tutorial Syllabus)	
	Material Covered
All Weeks	Solve problems related to the topics that explained by the theory lectures

Grading Scheme				
Group	**Grade**	التقدير	**Marks %**	**Definition**
Success Group (50 - 100)	**A** - Excellent	امتياز	90 - 100	Outstanding Performance
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