MODULE DESCRIPTION FORM

Module Information			
Module Title	**Arabic Language**	**Module Delivery**	
Module Type	**Core learning activity**	☒Theory ☐ Lecture ☐ Lab ☐Tutorial ☒Practical ☐Seminar	
Module Code			
ECTS Credits	**2**		
SWL (hr/sem)	**50**		
Module Level	1	**Semester of Delivery**	1
Administering Department	SSWR1969, PLPR1966, HOLA1974, FORE1964, FOSC1965, FICR1973, ANPR1964, AGEC1979, AETT1979, AGME1986	**College**	**AGFO1964**
Module Leader	Alla Mohamed Abdullah Omar Dheyaa Mohammed Asmaa Mohammed Adil Moyassar Mohammed Aziz **Nofal Issa Mohamed** sumyia khalaf Badawi Firas Kadhim Dawoo Aljuboori Khaled Anwer Khaled ALKHALED Talal Saeed Hameed Muzahim Saeed Al-Bek	**e-mail**	ala.mohammed58@uomosul.edu.iq dr.omaralmallah@uomosul.edu.iq asmaama@uomosul.edu.iq moyassar_aziz@uomosul.edu.iq nofelemh@uomosul.edu.iq dr.sumyia_khalf@uomosul.edu.iq firasaljuboori@uomosul.edu.iq khalid.anwar31@uomosul.edu.iq stalal1982@uomosul.edu.iq` muzahim_saeed@uomosul.edu.iq
Module Leader's Acad. Title	**Professor** Assistant Professor	**Module Leader's Qualification**	Ph.D. **MSc.**
Module Tutor	**Mrs. Sawsan Amen Kheder**	**e-mail**	N.A.
Peer Reviewer Name	N.A.	**e-mail**	N.A.
Scientific Committee Approval Date	15/10/2024	**Version Number**	1.0

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

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	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 LOs	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 = 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	Parts of Speech
Week 2	Original and Subordinate Diacritical Marks
Week 3	Verb Structure and Classification, Present Tense and Subjunctive
Week 4	Numbers in Arabic
Week 5	Linguistic Triangles
Week 6	Animal Sounds
Week 7	Midterm Exam
Week 8	Writing the Hamza in Arabic
Week 9	The Closed and Open Taa
Week 10	The Difference Between Dhad and Thaa
Week 11	Punctuation
Week 12	Common Mistakes
Week 13	Grammatical Mistakes
Week 14	Correction of Some Common Mistakes
Week 15	Explaining the Reasons for These Mistakes with Examples
Week 16	Morphological Mistakes

Learning and Teaching Resources

	Text	**Available in the Library?**
Required Texts		-
Recommended Texts		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.			

MSc. Sawsan Amen Kheder

Head of Department

Khalid Anwar Khaled

Chairman of scientific committee

Dr. Abdalkader Absh Sbak

MODULE DESCRIPTION FORM

Module Information			
Module Title	AGRICULTURE CAREER ETHICS	**Module Delivery**	
Module Type	Basic learning activities	☐ **Theory** ☐ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	ACE1020		
ECTS Credits	**3**		
SWL (hr/sem)	**75**		
Module Level	**1**	**Semester of Delivery**	1
Administering Department	SSWR1969, PLPR1966, HOLA1974, FORE1964, FOSC1965, FICR1973, ANPR1964, AGEC1979, AETT1979, AGME1986	**College**	**AGFO1964**
Module Leader	Alla Mohamed Abdullah Omar Dheyaa Mohammed Asmaa Mohammed Adil Moyassar Mohammed Aziz **Nofal Issa Mohamed** sumyia khalaf Badawi Firas Kadhim Dawoo Aljuboori Khaled Anwer Khaled ALKHALED Talal Saeed Hameed Muzahim Saeed Al-Bek	**e-mail**	ala.mohammed58@uomosul.edu.iq dr.omaralmallah@uomosul.edu.iq asmaama@uomosul.edu.iq moyassar_aziz@uomosul.edu.iq nofelemh@uomosul.edu.iq dr.sumyia_khalf@uomosul.edu.iq firasaljuboori@uomosul.edu.iq khalid.anwar31@uomosul.edu.iq stalal1982@uomosul.edu.iq muzahim_saeed@uomosul.edu.iq
Module Leader's Acad. Title	**Assistant Professor**	**Module Leader's Qualification**	**MSc.**
Module Tutor	**MSc.** Shaemaa Ganem Dauod	**e-mail**	N.A.
Peer Reviewer Name	N.A.	**e-mail**	N.A.
Scientific Committee Approval Date	15/10/2024	**Version Number**	1.0

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

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	1. Teaching ethics and ethical concepts to the agricultural engineer. 2. 2- Teaching the ethical rules of professional ethics and clarifying the ethics of agricultural engineering.
Module Learning Outcomes	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: Respects the laws and regulations related to agricultural engineering projects. LO#4: Bear ethical responsibilities in the fields of the agricultural engineering profession.
Indicative Contents	ndicative 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.

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)**	3
Unstructured SWL (h/sem)	63	**Unstructured SWL (h/w)**	1.87
Total SWL (h/sem)	125		

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	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	**Midterm 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 ethics
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	Corruption in the distribution of government support to farmers: its impact on small farms
Week 12	Agriculture's impact on local communities: ethical benefits and risks
Week 13	Ethics in cash crop 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		Yes
Recommended Texts		-
Websites	chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://ioar.mtu.edu.iq/wp content/uploads/2023/12/a5la8yat-mhna.pdf chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://itm.mtu.edu.iq/wp content/uploads/2024/04/%D8%A7%D8%AE%D9%84%D8%A7%D9%82%D9%8A%D8%A7%D8%AA-%D8%A7%D9%84%D9%85%D9%87%D9%86%D8%A9%D8%A7%D9%84%D9%85%D8%B1%D8%AD%D9%84%D8%A9%D8%A7%D9%84%D8%AB%D8%A7%D9%86%D9%8A%D8%A9.pdf	

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

Mrs. Shaemaa Ganem Dauod

Head of Department

Khalid Anwar Khaled

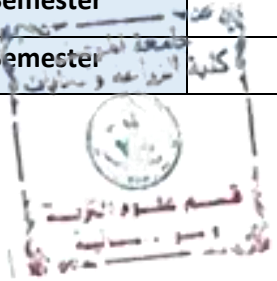
Chairman of scientific committee

Dr. Abdalkader Absh Sbak

MODULE DESCRIPTION FORM

Module Information				
Module Title	**COMPUTER1**	**Module Delivery**		
Module Type	Basic learning activities	☐ **Theory** ☐ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**		
Module Code	UOM1031			
ECTS Credits	**3**			
SWL (hr/sem)	**75**			
Module Level	**1**	**Semester of Delivery**	1	
Administering Department	SSWR1969, PLPR1966, HOLA1974, FORE1964, FOSC1965, FICR1973, ANPR1964, AGEC1979, AETT1979, AGME1986	**College**	**AGFO1964**	
Module Leader	Alla Mohamed Abdullah Omar Dheyaa Mohammed Asmaa Mohammed Adil Moyassar Mohammed Aziz **Nofal Issa Mohamed** sumyia khalaf Badawi Firas Kadhim Dawoo Aljuboori Khaled Anwer Khaled ALKHALED Talal Saeed Hameed Muzahim Saeed Al-Bek	**e-mail**	ala.mohammed58@uomosul.edu.iq dr.omaralmallah@uomosul.edu.iq asmaama@uomosul.edu.iq moyassar_aziz@uomosul.edu.iq nofelemh@uomosul.edu.iq dr.sumyia_khalf@uomosul.edu.iq firasaljuboori@uomosul.edu.iq khalid.anwar31@uomosul.edu.iq stalal1982@uomosul.edu.iq` muzahim_saeed@uomosul.edu.iq	
Module Leader's Acad. Title	**Professor** **Assistant Professor**	**Module Leader's Qualification**	Ph.D. **MSc.**	
Module Tutor	Omer Shamel Ahmed	**e-mail**	N.A.	
Peer Reviewer Name	N.A.	**e-mail**	N.A.	
Scientific Committee Approval Date	15/10/2024	**Version Number**	1.0	

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



Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	**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 Outcomes	**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. **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.

Delivery Plan (Weekly Lab. Syllabus)	
	Material Covered
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	اساسيات الحاسوب وتطبيقاته المكتبية، وزارة التعليم العالي والبحث العلمي، 2013.	Yes
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	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
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Subject Lecturer

Ms. Omer Shamel Ahmed

Head of Department

Khalid Anwar Khaled

Chairman of scientific committee

Dr. Abdalkader Absh Sbak

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**				
ECTS Credits	**2**				
SWL (hr/sem)	**50**				
Module Level	1		**Semester of Delivery**		1
Administering Department	SSWR1969, PLPR1966, HOLA1974, FORE1964, FOSC1965, FICR1973, ANPR1964, AGEC1979, AETT1979, AGME1986		**College**	AGFO1964	
Module Leader	Alla Mohamed Abdullah Omar Dheyaa Mohammed Asmaa Mohammed Adil Moyassar Mohammed Aziz **Nofal Issa Mohamed** sumyia khalaf Badawi Firas Kadhim Dawoo Aljuboori Khaled Anwer Khaled ALKHALED Talal Saeed Hameed Muzahim Saeed Al-Bek		**e-mail**	ala.mohammed58@uomosul.edu.iq dr.omaralmallah@uomosul.edu.iq asmaama@uomosul.edu.iq moyassar_aziz@uomosul.edu.iq nofelemh@uomosul.edu.iq dr.sumyia_khalf@uomosul.edu.iq firasaljuboori@uomosul.edu.iq khalid.anwar31@uomosul.edu.iq stalal1982@uomosul.edu.iq` muzahim_saeed@uomosul.edu.iq	
Module Leader's Acad. Title	**Professor** **Assistant Professor**		**Module Leader's Qualification**		Ph.D. M.Sc.
Module Tutor	N.A.		**e-mail**	N.A.	
Peer Reviewer Name	N.A.		**e-mail**	N.A.	
Scientific Committee Approval Date	15/10/2024		**Version Number**		1.0

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

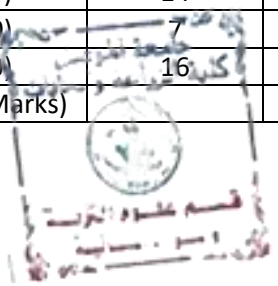
Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	1- Enabling the student to understand and comprehend what is related to human rights, their types, and rights in the heavenly religions. 2- Enabling the student to recognize the types of human rights and human rights according 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	**Availabl e 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 مخطط الدرجات				
Group	**Grade**	التقدير	**Marks %**	**Definition**
Success Group (50 - 100)	**A** - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	**FX** – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

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

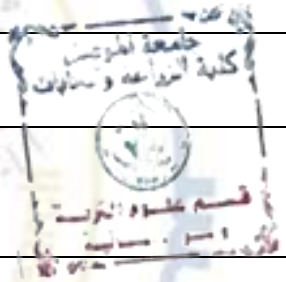
Subject Lecturer
Mustafa Ahmed Fouad

Head of Department
Khalid Anwar Khaled

Chairman of scientific committee
Dr. Abdalkader Absh Sbak

MODULE DESCRIPTION FORM

Module Information				
Module Title	**ENGINEERING DRAWING**	**Module Delivery**		
Module Type	S	☒ **Theory** ☐ **Lecture** ☐ **Lab** ☐ **Tutorial** ☒ **Practical** ☐ **Seminar**		
Module Code	END1030			
ECTS Credits	6			
SWL (hr/sem)	150			
Module Level	**I**	**Semester of Delivery**	1	
Administering Department	AGME1986	**College**	**AGFO1964**	
Module Leader	Nofal Issa Mohamed	**e-mail**	nofelemh@uomosul.edu.iq	
Module Leader's Acad. Title	Assistant Professor	**Module Leader's Qualification**	**MSc.**	
Module Tutor	**MSc. Othman Moaed Mohammed**	**e-mail**	N.A.	
Peer Reviewer Name	N.A.	**e-mail**	N.A.	
Scientific Committee Approval Date	15/10/2024	**Version Number**	1.0	



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

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	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

Delivery Plan (Weekly, Syllabus)	
	Material Covered
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	-
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.

Subject Lecturer

MSc. Othman Moaed Mohammed

Head of Department

Khalid Anwar Khaled

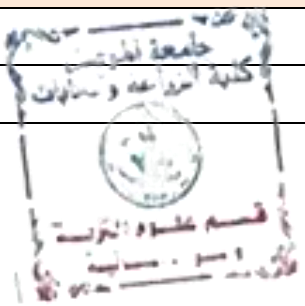
Chairman of scientific committee

Dr. Abdalkader Absh Sbak

MODULE DESCRIPTION FORM

Module Information			
Module Title	ENGLISH LANGUAGE	**Module Delivery**	
Module Type	**Basic learning activities**	☒Theory ☒Lecture ☐ Lab ☒Tutorial ☐ Practical ☐Seminar	
Module Code	UOM1021		
ECTS Credits	2		
SWL (hr/sem)	50		
Module Level	1	**Semester of Delivery**	1
Administering Department	SSWR1969	**College**	AGFO1964
Module Leader	Khaled Anwer Khaled ALKHALED Omar Nabhan Abdulqader	**e-mail**	khalid.anwar31@uomosul.edu.iq
Module Leader's Acad. Title	Alla Mohamed Abdullah Omar Dheyaa Mohammed Asmaa Mohammed Adil Moyassar Mohammed Aziz **Nofal Issa Mohamed** sumyia khalaf Badawi Firas Kadhim Dawoo Aljuboori Khaled Anwer Khaled ALKHALED Talal Saeed Hameed Muzahim Saeed Al-Bek	**e-mail**	ala.mohammed58@uomosul.edu.iq dr.omaralmallah@uomosul.edu.iq asmaama@uomosul.edu.iq moyassar_aziz@uomosul.edu.iq nofelemh@uomosul.edu.iq dr.sumyia_khalf@uomosul.edu.iq firasaljuboori@uomosul.edu.iq khalid.anwar31@uomosul.edu.iq stalal1982@uomosul.edu.iq` muzahim_saeed@uomosul.edu.iq
Module Tutor	Ph.Dr. Omar Nabhan Abdulqader	**e-mail**	N.A.
Peer Reviewer Name	N.A.	**e-mail**	N.A.
Scientific Committee Approval Date	15/10/2024	**Version Number**	1.0

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

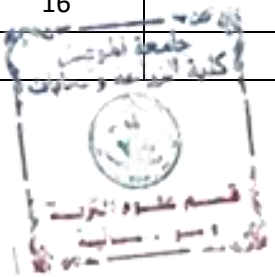


Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	To make the students able to speak English and to communicate with others . Also, to enable the students and improve reading skills ,write and grammar in English language in academic and scientific ways)
Module Learning Outcomes LOs	The student should be able to: LO#1: pronouncing words and letters correctly LO#2: improve and develop English language for daily use LO#3: develop reading skills LO#4: improve grammar and improve writing skills
Indicative Contents	

Learning and Teaching Strategies	
Strategies	1. Interactive lecture, Brainstorming 2. Dialogue and discussion 3. Assigning reports and Homeworks 4. Quizzes

Student Workload (SWL)			
Structured SWL (h/sem)	32	**Structured SWL (h/w)**	2
Unstructured SWL (h/sem)	18	**Unstructured SWL (h/w)**	1.2
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	
	Assignments	2	10% (10)	2 and 13	
	Homework	4	10% (10)	4, 8 and 12	All
	Report	1	10% (10)	14	
Summative assessment	**Midterm Exam**	2hr	10% (10)	7	
	Final Exam	2hr	50% (50)	16	
Total assessment			100% (100 Marks)		



Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	Nouns , types of Nouns , countable and uncountable nouns
Week 2	Verbs and auxiliary verbs
Week 3	Present simple
Week 4	Every day English numbers, times, In train station
Week 5	Past simple
Week 6	Adjectives
Week 7	Negative and positive
Week 8	Reading/ using water for agricultural
Week 9	Question word (how , what , why,when ,where …)
Week 10	Adverb of frequency
Week 11	Linking words So, because and but
Week 12	Every day English in cloth shop ,direction , months and date
Week 13	Pronoun
Week 14	Reading / What do English people eat
Week 15	Pronunciation
Week 16	Preparatory week before the final Exam

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts	New Headway plus John and Liz Soars	Yes
Recommended Texts	Essential Grammar in use Raymond Murphy	Yes
Websites	https://www.bbc.co.uk/learningenglish/ https://learnenglish.britishcouncil.org/	

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.

Subject Lecturer

Omar Nabhan Abdulqader

Head of Department

Khalid Anwar Khaled

Chairman of scientific committee

Dr. Abdalkader Absh Sbak

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**				
ECTS Credits	**7**				
SWL (hr/sem)	**175**				
Module Level	**1**	**Semester of Delivery**		**1**	
Administering Department	**SSWR1969, PLPR1966, HOLA1974, FORE1964, FOSC1965, FICR1973, ANPR1964, AGEC1979, AETT1979, AGME1986**	**College**	**AGFO1964**		
Module Leader	Alla Mohamed Abdullah Omar Dheyaa Mohammed Asmaa Mohammed Adil Moyassar Mohammed Aziz **Nofal Issa Mohamed** sumyia khalaf Badawi Firas Kadhim Dawoo Aljuboori Khaled Anwer Khaled ALKHALED Talal Saeed Hameed Muzahim Saeed Al-Bek	**e-mail**	ala.mohammed58@uomosul.edu.iq dr.omaralmallah@uomosul.edu.iq asmaama@uomosul.edu.iq moyassar_aziz@uomosul.edu.iq nofelemh@uomosul.edu.iq dr.sumyia_khalf@uomosul.edu.iq firasaljuboori@uomosul.edu.iq khalid.anwar31@uomosul.edu.iq stalal1982@uomosul.edu.iq muzahim_saeed@uomosul.edu.iq		
Module Leader's Acad. Title	**Professor** **Assistant Professor**	**Module Leader's Qualification**		Ph.D. **MSc.**	
Module Tutor	**Mrs. Shamel Mohammed Saleh**	**e-mail**	**N.A.**		
Peer Reviewer Name	**N.A.**	**e-mail**	**N.A.**		
Scientific Committee Approval Date	**15/10/2024**	**Version Number**	**1.0**		

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

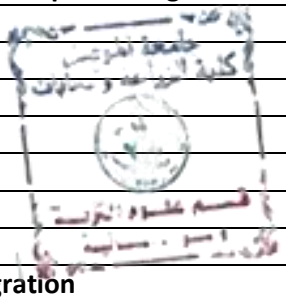
Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	- -To enable students to acquire proficiency in performing differential calculus operations. - In the field of calculus, the fundamental methodologies used to examine and describe functions are limits, derivatives, and integrals. - 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**	**Marks %**	**Definition**
Success Group (50 - 100)	**A** - Excellent	90 - 100	Outstanding Performance
	B - Very Good	80 - 89	Above average with some errors
	C - Good	70 - 79	Sound work with notable errors
	D - Satisfactory	60 - 69	Fair but with major shortcomings
	E - Sufficient	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	**FX** – Fail	(45-49)	More work required but credit awarded
	F – Fail	(0-44)	Considerable amount of work required

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Subject Lecturer

Mrs. Shamel Mohammed Saleh

Head of Department

Khalid Anwar Khaled

Chairman of scientific committee

Dr. Abdalkader Absh Sbak

MODULE DESCRIPTION FORM

Module Information					
Module Title	**Agricultural Informatics**			**Module Delivery**	
Module Type	**Core learning activity**			☒ **Theory** ☐ **Lecture** ☐ **Lab** ☐ **Tutorial** ☒ **Practical** ☐ **Seminar**	
Module Code	**AGI1080**				
ECTS Credits	5.00				
SWL (hr/sem)	125				
Module Level	1	**Semester of Delivery**		1	
Administering Department	SSWR1969, PLPR1966, HOLA1974, FORE1964, FOSC1965, FICR1973, ANPR1964, AGEC1979, AETT1979, AGME1986	**College**	AGFO1964		
Module Leader	Alla Mohamed Abdullah Omar Dheyaa Mohammed Asmaa Mohammed Adil Moyassar Mohammed Aziz **Nofal Issa Mohamed** sumyia khalaf Badawi Firas Kadhim Dawoo Aljuboori Khaled Anwer Khaled ALKHALED Talal Saeed Hameed Muzahim Saeed Al-Bek	**e-mail**	ala.mohammed58@uomosul.edu.iq dr.omaralmallah@uomosul.edu.iq asmaama@uomosul.edu.iq moyassar_aziz@uomosul.edu.iq nofelemh@uomosul.edu.iq dr.sumyia_khalf@uomosul.edu.iq firasaljuboori@uomosul.edu.iq khalid.anwar31@uomosul.edu.iq stalal1982@uomosul.edu.iq` muzahim_saeed@uomosul.edu.iq		
Module Leader's Acad. Title	Professor	**Module Leader's Qualification**		**Ph.D.** **MSc.**	
Module Tutor	Dr. Aman Adel Maolod Ms. Ahmed Sameer Ganem	**e-mail**	Aman_adel@uomosul.edu.iq		
Peer Reviewer Name	N.A.	**e-mail**	N.A.		
Scientific Committee Approval Date		**Version Number**	1.0		

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

Module Aims, Learning Outcomes and Indicative Contents

Module Objectives	This Module introduces students to the principles and applications of informatics in agriculture. Students will learn to utilize information technology, data analysis, and decision-support systems to enhance agricultural productivity while ensuring sustainable practices.
Module Learning Outcomes LOs	- Understand the basic concepts of agricultural informatics and its role in sustainable agriculture. - Identify key technologies such as IoT, GIS, remote sensing, and machine learning in agriculture. - Explain the relevance of data-driven decision-making for improving agricultural operations. - Apply data collection and analysis techniques to solve practical agricultural problems. - Use software tools like GIS platforms for mapping and analysis. - Know how to design basic IoT systems for monitoring soil, water, and plant conditions. - Work collaboratively on projects integrating informatics into real-world agricultural challenges.
Indicative Contents	The Agricultural Informatics module bridges Information technology and agriculture, focusing on modern tools like IoT, GIS, AI, and big data to optimize productivity and sustainability. It covers data management, precision farming, remote sensing, and decision support systems. Students gain hands-on experience with GIS mapping, IoT setups, and AI models, enabling them to address challenges like resource efficiency, climate adaptation, and food security through innovative, data-driven strategies. This Module prepares graduates to implement cutting-edge solutions in agriculture for a sustainable future.

Learning and Teaching Strategies
استراتيجيات التعلم والتعليم

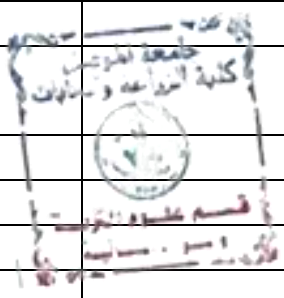
Strategies	1. Interactive lecture, Brainstorming 2. Dialogue and discussion 3. Assigning reports 4. Quizzes 5. Show examples for writing scientific reports in the correct formats.

Student Workload (SWL)

Structured SWL (h/sem)		**Structured SWL (h/w)**	
Unstructured SWL (h/sem)		**Unstructured SWL (h/w)**	
Total SWL (h/sem)			

Module Evaluation

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	**Quizzes**		10% (10)		
	Assignments		10% (10)		
	Projects/ Practical		10% (10)		
	Report		10% (10)		
Summative assessment	**Midterm Exam**	3hr	10% (10)		
	Final Exam	3hr	50% (50)		
Total assessment			100% (100 Marks)		

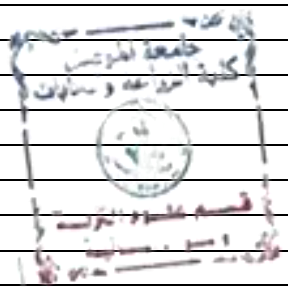


Delivery Plan (Weekly Syllabus)

	Material Covered
Week 1	Introduction to Agricultural Informatics
Week 2	Geographic Information Systems (GIS) in Agriculture
Week 3	Internet of Things (IoT) in Smart Agriculture
Week 4	Machine Learning and Artificial Intelligence in Agriculture
Week 5	Remote Sensing in Agriculture
Week 6	Precision Agriculture – GPS and Drones
Week 7	Mid-term Exam
Week 8	Decision Support Systems (DSS) in Agriculture
Week 9	Data Analysis in Agriculture
Week 10	Big Data in Agriculture
Week 11	Sustainable Practices and Climate-Smart Agriculture
Week 12	Smart Greenhouses
Week 13	Livestock Informatics
Week 14	Blockchain Technology and Food Traceability
Week 15	The Future of Agricultural Informatics
Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly Projects Syllabus)

	Material Covered
Week 1	Discussion on Agricultural Informatics Applications in Iraq.
Week 2	Creating a Local Agricultural Map Using GIS
Week 3	Setting up a Simple Soil Monitoring Device Using Local Tools
Week 4	Using Spreadsheets for Yield Analysis
Week 5	Using Free Satellite Images for Land Analysis
Week 6	Simulating GPS Use for Agricultural Mapping
Week 7	Creating a Simple Irrigation DSS Model Using Excel
Week 8	Analyzing Agricultural Data Using Spreadsheet Software
Week 9	Discussion on Big Data in Agriculture
Week 10	Assessing Sustainability in a Local Agricultural System
Week 11	Designing a Simple Prototype of a Manual Robot
Week 12	Building a Small Greenhouse Using Local Materials
Week 13	Monitoring Livestock Health Using Simple Models
Week 14	Simulating Crop Tracking from Farm to Market
Week 15	Final Project Presentations, that present practical projects addressing local agricultural challenges focusing on feasible technology-based solutions.



Learning and Teaching Resources

	Text	Available in the Library?
Required Texts	• Choudhury, A., Biswas, A., Prateek, M., & Chakraborty, A. (2021). Agricultural Informatics: Automation Using IoT and Machine Learning. Wiley-Scrivener.	No
Recommended Texts	• Pierce, F. J., & Zhang, Q. (2016). Agricultural Automation: Fundamentals and Practices. CRC Press. • Shamtsyan, M., Pasetti, M., & Beskopylny, A. (2021). Robotics, Machinery and Engineering Technology for Precision Agriculture. Springer.	

	• Li, D. (2016). Computer and Computing Technologies in Agriculture: Proceedings of CCTA. Springer. • Satapathy, S., Mishra, D., Vargas, A. R., & El-Bendary, N. (2022). Innovation in Agriculture with IoT and AI. Springer. • Singh, R., Gehlot, A., Singh, B., & Choudhury, S. (2022). Internet of Things (IoT) Enabled Automation in Agriculture. CRC Press. • Boote, K. J. (Ed.). (2021). Advances in Crop Modelling for Sustainable Agriculture. CAB International.	
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.			

Subject Lecturer
Dr. Aman Adel Maolod

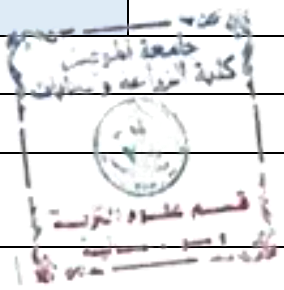
Subject Lecturer
Ms. Ahmed Sameer Ganem

Head of Department
Khalid Anwar Khaled

Chairman of scientific committee
Dr. Abdalkader Absh Sbak

MODULE DESCRIPTION FORM

Module Information					
Module Title	**AGRICULTURAL MARKETING TECHNIQUES**			**Module Delivery**	
Module Type	**Basic learning activities**			☒Theory ☐Lecture ☐Lab ☐Tutorial ☐Practical ☐Seminar	
Module Code	AMT1100				
ECTS Credits	5				
SWL (hr/sem)	125				
Module Level	2		**Semester of Delivery**	1	
Administering Department	SSWR1969, PLPR1966, HOLA1974, FORE1964, FOSC1965, FICR1973, ANPR1964, AGEC1979, AETT1979, AGME1986		**College**	AGFO1964	
Module Leader	Alla Mohamed Abdullah Omar Dheyaa Mohammed Asmaa Mohammed Adil Moyassar Mohammed Aziz **Nofal Issa Mohamed** sumyia khalaf Badawi Firas Kadhim Dawoo Aljuboori Khaled Anwer Khaled ALKHALED Talal Saeed Hameed Muzahim Saeed Al-Bek		**e-mail**	Ala.mohammed58@uomosul.edu.iq dr.omaralmallah@uomosul.edu.iq asmaama@uomosul.edu.iq moyassar_aziz@uomosul.edu.iq nofelemh@uomosul.edu.iq dr.sumyia_khalf@uomosul.edu.iq firasaljuboori@uomosul.edu.iq khalid.anwar31@uomosul.edu.iq stalal1982@uomosul.edu.iq` muzahim_saeed@uomosul.edu.iq	
Module Leader's Acad. Title	Professor assistant professor		**Module Leader's Qualification**	Ph.D. MSC	
Module Tutor	Ph.D. Qais Nahom Gazal		**e-mail**	N.A.	
Peer Reviewer Name	N.A.		**e-mail**	N.A.	
Scientific Committee Approval Date	15/10/2024		**Version Number**	1.0	

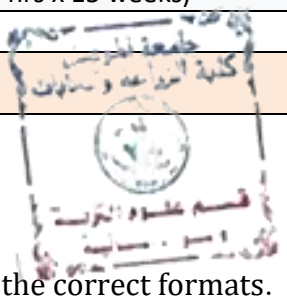


Relation with other Modules			
Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	1. Enabling the student to understand and comprehend what is related to agricultural marketing. 2. Enabling the student to know the markets and intermediaries in the marketing process and Knowledge of the approaches in the marketing process and the functions of buying and selling, transportation, storage and other functions (assembly - processing - staging - financing - collecting marketing information - taking risks - packing – wrapping. 3. Enabling the student to become familiar with the market demand curve. 4. Enabling the student to know contracts and their advantages and disadvantages 5. The student can learn about agricultural prices and the equilibrium price.

Module Learning Outcomes	1-Agricultural marketing is considered the activity through which ownership of goods and services is transferred from the original producer to the final consumer at the specified time and place. 2- The goods are transferred either from the original producer to the final consumer, or they may pass through the wholesaler and retailer to the final consumer. 3- Efficiency in the marketing process is known. 4-How to achieve marketing margins for the producer and consumer. 5-Knowing agricultural prices when marketing agricultural crops.
Indicative Contents	Indicative content includes the following. Part A - Circuit Theory Developing the correct management skills for agricultural marketing in the precise specialization and determining the appropriate means for marketing agricultural products in the fastest time, highest marketing efficiency and lowest costs, and working to transport agricultural commodities through good and fast transportation methods to ensure transportation in the fastest times because agricultural crops are susceptible to rapid spoilage if they are not transported and stored in storage methods. Various types, and work on packing agricultural products in glass, cardboard, plastic or wooden boxes. practical The most important modern means of shopping will be discussed, such as electronic marketing via the Internet. Students will also be taught how to shop practically by visiting wholesale marketing places and teaching students how a merchant or broker works in shopping. Total hrs = 32 = SSWL - (Exam hrs) = 32 - 2 = 30 hr (Time table hrs x 15 weeks)

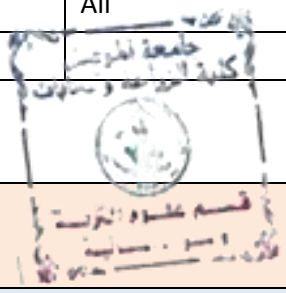
Learning and Teaching Strategies	
Strategies	1. Interactive lecture, Brainstorming 2. Dialogue and discussion 3. Assigning reports 4. Quizzes 5. Show examples for writing scientific reports in the correct formats.



Student Workload (SWL)			
Structured SWL (h/sem)	32	**Structured SWL (h/w)**	2
Unstructured SWL (h/sem)	93	**Unstructured SWL (h/w)**	6
Total SWL (h/sem)	125		

Module Evaluation

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



Delivery Plan (Weekly Syllabus)

	Material Covered
Week 1	The concept of agricultural marketing and its importance to the producer, consumer and intermediaries (those working in agricultural marketing) .
Week 2	It explains the introduction to marketing studies and includes the commodity approach and includes exchange functions (buying and selling) .
Week 3	Explanation of the job introduction, which includes actual jobs and services, including (transportation and storage)
Week 4	It explains the facilitating functions and services, including assembly, processing, and financing
Week 5	Explains advertising, packaging, its importance and levels, packaging and its principles, grading, similarity, and packaging.
Week 6	Recognizes the types of markets, types of intermediaries, and markets in the marketing process and Explains contracts, their definition, advantages and disadvantages to the farmer and their advantages and disadvantages to the buyer .
Week 7	**Midterm Exam**

Week 8	Explains the origins of the food industries, which include (canning, natural and artificial drying, cooking, pasteurization, and freezing).
Week 9	Explains the demand for agricultural commodities (definition of demand, determinants of demand, elasticities of demand, market demand) .
Week 10	Applies to the laws and elasticity of demand for agricultural commodities
Week 11	Explains the supply of agricultural commodities (definition of supply, determinants of supply, elasticities of supply, market supply .
Week 12	Applies to the laws and elasticity of supply
Week 13	Knows agricultural prices and their importance, price margins, and price spread Explains the meaning of electronic marketing (its advantages and disadvantages) and its impact on the marketing mix .
Week 14	Explains the meaning of electronic marketing (its advantages and disadvantages) and its impact on the marketing mix
Week 15	Knows marketing efficiency and mentions its types and how to measure it
Week 16	Preparing the student for the final exam .

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts	Principles of Agricultural Marketing, Abu Saeed Al-Duwaihji, Al-Hamid Publishing House, 2001, Amman.	Yes
Recommended Texts	— Ali Faleh Al-Zaib, "Marketing Management - A Strategic Applied Perspective," Dar Al-Yazouri Scientific, 2019. - Ali Faleh Al-Zouaib, "Marketing Communications: An Applied Methodological Approach," 9th Edition, Dar Al-Masiriya for Publishing and Distribution, Amman-Jordan, 2191 – Issa Hammoud Al-Hassan, "Commercial Promotion of Goods and Services," 9th edition, Zahran Publishing and Distribution House, Oman, .2191 - Ghassan Qasim Daoud Al-Almi, "Marketing Management New Ideas and Directions," 9th edition, Safaa Publishing House. Distribution, Amman	No
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.			

Subject Lecturer

Ph.D. Qais Nahom Gazal

Head of Department

Khalid Anwar Khaled

Chairman of scientific committee

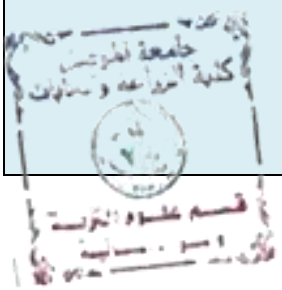
Dr. Abdalkader Absh Sbak

MODULE DESCRIPTION FORM

Module Information					
Module Title	AGRICULTURAL STATISTICS			**Module Delivery**	
Module Type	**Basic learning activities**			☒Theory ☒Lecture ☐Lab ☒ L Tutorial ☐Practical ☐Seminar	
Module Code	**AGS1060**				
ECTS Credits	**5**				
SWL (hr/sem)	**125**				
Module Level	1		**Semester of Delivery**	2	
Administering Department	SSWR1969, PLPR1966, HOLA1974, FORE1964, FOSC1965, FICR1973, ANPR1964, AGEC1979, AETT1979, AGME1986		**College**	AGFO1964	
Module Leader	Alla Mohamed Abdullah Omar Dheyaa Mohammed Asmaa Mohammed Adil Moyassar Mohammed Aziz **Nofal Issa Mohamed** sumyia khalaf Badawi Firas Kadhim Dawoo Aljuboori Khaled Anwer Khaled ALKHALED Talal Saeed Hameed Muzahim Saeed Al-Bek		**e-mail**	ala.mohammed58@uomosul.edu.iq dr.omaralmallah@uomosul.edu.iq asmaama@uomosul.edu.iq moyassar_aziz@uomosul.edu.iq nofelemh@uomosul.edu.iq dr.sumyia_khalf@uomosul.edu.iq firasaljuboori@uomosul.edu.iq khalid.anwar31@uomosul.edu.iq stalal1982@uomosul.edu.iq` muzahim_saeed@uomosul.edu.iq	
Module Leader's Acad. Title	Lecturer		**Module Leader's Qualification**	Ph.D.	
Module Tutor	Dr. Omar Nabhan Abdulqader Ms. Mootasem Daoud Soleman		**e-mail**	umarn79@uomosul.edu.iq	
Peer Reviewer Name	N.A.		**e-mail**	N.A.	
Scientific Committee Approval Date	15/10/2024		**Version Number**	1.0	

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

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	1- Knows statistics and its types, and differentiates between descriptive statistics and inferential or inferential statistics 2- Explains what descriptive variables are, and recognizes the difference between a sample and a population 3- Organizes and draws a frequency distribution table and identifies its parts 4- Organizes a relative frequency distribution table and ascending and descending summation 5-Finds the arithmetic mean - and recognizes the properties of the arithmetic mean 6- Works on how to find the range, mean deviation, variance, and standard deviation
Module Learning Outcomes	1- Knows statistics and its types, and differentiates between descriptive statistics and inferential or inferential statistics 2- Explains what descriptive variables are, and identifies the difference between a sample and a community 3- Organizes and draws a frequency distribution table and identifies its parts 4- Organizes a relative frequency distribution table and ascending and descending summation 5- Finds the arithmetic mean - and identifies the properties of the arithmetic mean 6- Works on how to find the range, mean deviation, variance and standard deviation 7- Expresses the components of discrete probability distributions 8- Recognizes the statistical hypothesis, the null hypothesis and the alternative hypothesis - Compares the types of error 9- T-TEST 10- Determine correlation coefficient and kind of relationship among variables 11- Determine simple regression analysis
Indicative Contents	Enriching the student with knowledge regarding the conduct and benefit of the agricultural statistical process, and learning how to measure the measurement of centering, mediation and correlation and how to employ them in the field of agricultural engineering sciences and techniques for implementing integration correctly to reach quantity and quality. Determine correlation coefficient for data and simple regression analysis for scientific data . **Total hrs = 63 = SSWL - (Exam hrs) = 63 - 3 = 60 hr (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)	78	**Structured SWL (h/w)**	5
Unstructured SWL (h/sem)	47	**Unstructured SWL (h/w)**	6
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, #2 and #10, #11
	Assignments	1	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	**Midterm Exam**	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	Introduction to the nature of statistics science
Week 2	The nature of statistical data - the difference between quantitative and descriptive variables
Week 3	The difference between society and sample with mathematical examples
Week 4	Tabular and Graphing and represent the data
Week 5	Frequency Distribution
Week 6	Measures of mediation and centering - arithmetic mean - geometric mean

Week 7	harmonic mean - squared mean - median - mode
Week 8	Measures of dispersion or variation - range - mean deviation - variance ,standard deviation and coefficient of variation and standard error
Week 9	Elementary probability theory
Week 10	Mid-term exam
Week 11	Continuous probability distributions (Normal distribution)
Week 12	Discrete probability distributions
Week 13	Correlation coefficient
Week 14	Simple regression analysis
Week 15	Multiple regression analysis
Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	The natural of statistical data
Week 2	The natural of statistical data
Week 3	Statistical symbol
Week 4	Graphical represent and display of data
Week 5	Graphical represent and display of data
Week 6	Measures of mediation and centering
Week 7	Measures of mediation and centering
Week 8	Measure of dispersion or different
Week 9	Measure of dispersion or different
Week 10	Midterm exam
Week 11	Probability theory
Week 12	Statistical test
Week 13	Statistical test
Week 14	Correlation coefficient data analysis
Week 15	**Preparatory week before the final Exam**

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts	المدخل الى علم الإحصاء - مبادى علم الإحصاء	Yes
Recommended Texts	كتاب علم الإحصاء وأساليب علم الاحصاء	No
Websites	https://www.udemy.com/course/bmwqjwxb/?srsltid=AfmBOooesbV6jEmBd_tAQSa288D_ _QY0Hc1yK1i3seCLaNtYAT4ckpyn	

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

Dr. Omar Nabhan Abdulqader

Subject Lecturer

Ms. Mootasem Daoud Soleman

Head of Department

Khalid Anwar Khaled

Chairman of scientific committee

Dr. Abdalkader Absh Sbak

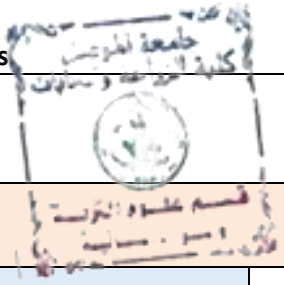
MODULE DESCRIPTION FORM

Module Information					
Module Title	**Arabic Language**			**Module Delivery**	
Module Type	**Support or related learning activity**			☒ Theory ☐ Lecture ☐ Lab ☒ Tutorial ☐ Practical ☐ Seminar	
Module Code					
ECTS Credits	**2**				
SWL (hr/sem)	**50**				
Module Level	**1**	**Semester of Delivery**		**1**	
Administering Department	**SSWR1969, PLPR1966, HOLA1974, FORE1964, FOSC1965, FICR1973, ANPR1964, AGEC1979, AETT1979, AGME1986**	**College**	**AGFO1964**		
Module Leader	Alla Mohamed Abdullah Omar Dheyaa Mohammed Asmaa Mohammed Adil Moyassar Mohammed Aziz **Nofal Issa Mohamed** sumyia khalaf Badawi Firas Kadhim Dawoo Aljuboori Khaled Anwer Khaled ALKHALED Talal Saeed Hameed Muzahim Saeed Al-Bek	**e-mail**	ala.mohammed58@uomosul.edu.iq dr.omaralmallah@uomosul.edu.iq asmaama@uomosul.edu.iq moyassar_aziz@uomosul.edu.iq nofelemh@uomosul.edu.iq dr.sumyia_khalf@uomosul.edu.iq firasaljuboori@uomosul.edu.iq khalid.anwar31@uomosul.edu.iq stalal1982@uomosul.edu.iq muzahim_saeed@uomosul.edu.iq		
Module Leader's Acad. Title	**Professor** **Assistant Professor**	**Module Leader's Qualification**		Ph.D. **MSc.**	
Module Tutor	**Mrs. Sawsan Amen Khder**	**e-mail**	**N.A.**		
Peer Reviewer Name		**e-mail**	**N.A.**		
Scientific Committee Approval Date	**15/10/2024**	**Version Number**	**1.0**		

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

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	1. Enabling students to express themselves in classical Arabic. 2. Developing students' grammatical and morphological skills. 3. Encouraging students to listen, read, and express themselves. 4. Directing students to valuable resources that help them expand their cognitive horizons. 5. Fostering a love of the Arabic language through interactive activities. 6. Connecting topics to students' daily lives to bring them closer to reality.
Module Learning Outcomes	The student will be able to: LO#1: Avoid spelling and grammatical errors (writing and pronouncing numbers according to the rules, writing the hamzat al-wasl and hamzat al-qata', and distinguishing between the ta' marbuta and the fatha). LO#2: Distinguish between the primary and secondary diacritical marks. LO#3: Master the keys to diacritical marks. LO#4: Avoid many errors when speaking or writing.
Indicative Contents	Total hrs = 63 = SSWL - (Exam hrs) = 63 - 3 = 60 hr (Time table hrs x 15 weeks)

Learning and Teaching Strategies	
Strategies	1. Interactive lecture, brainstorming 2. Dialogue and discussion 3. Assigning reports 4. Tests 5. Group work assignments to reveal leadership skills



Student Workload (SWL)			
Structured SWL (h/sem)	32	Structured SWL (h/w)	4
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)	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	Parts of Speech
Week 2	Subordinate and Primary Diacritical Marks
Week 3	Verb Structure and Classification, Present Tense and Subjunctive
Week 4	Numbers in Arabic
Week 5	Linguistic Triangles
Week 6	Animal Sounds
Week 7	Writing the Hamza in Arabic
Week 8	The Closed and Open Taa
Week 9	The Difference Between the Letters Dhad and Thaa
Week 10	Punctuation
Week 11	Common Mistakes
Week 12	Grammatical Mistakes
Week 13	Correcting Some Common Mistakes
Week 14	Explaining the Reason for These Mistakes
Week 15	Examples of Mistakes
Week 16	Morphological Mistakes

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts		**No**
Recommended Texts		**No**
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.

Subject Lecturer

Mrs. Sawsan Amen Khder

Head of Department

Khalid Anwar Khaled

Chairman of scientific committee

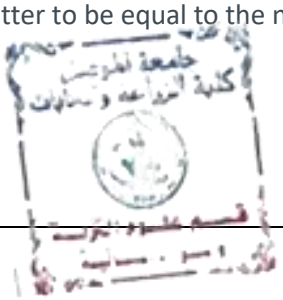
Dr. Abdalkader Absh Sbak

MODULE DESCRIPTION FORM

Module Information					
Module Title	**BIODIVERSITY**			**Module Delivery**	
Module Type	**Basic learning activities**			☒ **Theory** ☒ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**BIO1070**				
ECTS Credits	**5**				
SWL (hr/sem)	**125**				
Module Level	4		**Semester of Delivery**	2	
Administering Department	Type Dept. Code		**College**	Agriculture and forestry college	
Module Leader	Dr. Rand Abdalhade Gazal Dr. Hesham Saadalden Younes		**e-mail**	Randaltaee44@uomosul.edu.iq Heshamsaad293@uomosul.edu.iq	
Module Leader's Acad. Title	Master		**Module Leader's Qualification**	Teacher	
Module Tutor	Dr. hesham saad aldeen **Dr.Rand Abdalhadi Ghazal**		**e-mail**	E-mail: harbawee79@uomosul.edu.iq	
Peer Reviewer Name			**e-mail**	E-mail:	
Scientific Committee Approval Date	01/02/2025		**Version Number**	1.0	

Relation with other Modules			
Prerequisite module	**SOIL MICROBIOLOGY**	**Semester**	1
Co-requisites module	**BIOSAFETY and SECURITY**	**Semester**	2

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	1. Enable students to appreciate the importance of biodiversity conservation in addressing environmental challenges and climate change. 2. Provide students with fundamental concepts of biological diversity and the role of living organisms in ecosystems.
Module Learning Outcomes	Important: Write at least 6 Learning Outcomes, better to be equal to the number of study weeks. 1- Interactive lecture 2- Brainstorming 3- Dialogue and discussion 4- Field Training



	5- Practical exercises 6- Field project 7- Interactive lectures 8-Brainstorming 9- Self-education The student should be able to: LO#1: Identify classifications of living organisms and patterns of biological diversity in various environments. LO#2: Understand the evolutionary and genetic mechanisms that contribute to the emergence of biodiversity over time. LO#3: Evaluate threats to biodiversity and analyze the impact of human activities on ecosystems. LO#4: Propose suitable strategies for biodiversity conservation and the sustainable use of natural resources.
EE#DS	Indicative content includes the following: Introduction to Soil Physics • Soil as a natural resource. [SSWL=30 hrs] Soil Survey and classification - [SSWL=20 hrs] Revision problem classes [SSWL=6 hrs] Fundamentals [SSWL=44 hrs] Total hrs = 105 = SSWL - (Exam hrs) = 109 - 4 = 105 hr (Time table hrs x 15 weeks)

Learning and Teaching Strategies	
Strategies	- Interactive lecture - Brainstorming - Dialogue and discussion - Field Training - Practical exercises - Field project - Interactive lectures - Brainstorming

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

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	Introduction to Biological Diversity
Week 2	Taxonomy and Scientific Nomenclature
Week 3	Genetic Diversity and Evolution
Week 4	Ecological Diversity and Ecosystems
Week 5	Measuring Biodiversity and Its Indicators
Week 6	Factors Affecting Biological Diversity
Week 7	Mid-term Exam
Week 8	Environmental and Economic Value of Biodiversity
Week 9	Current Threats to Biodiversity
Week 10	Species Extinction and Conservation Strategies
Week 11	Biodiversity in Aquatic Ecosystems
Week 12	Biodiversity in Terrestrial Ecosystems
Week 13	Climate Change and Its Impact on Biodiversity
Week 14	Biodiversity and Sustainable Development
Week 15	Natural Resource Management and Sustainable Use
Week 16	Future Directions in Biodiversity Enhancement

Delivery Plan (Weekly Seminar. Syllabus)	
	Material Covered
Week 1	Future Directions in Biodiversity Enhancement
Week 2	Collection and Classification of Plant and Animal Samples
Week 3	Practical Applications of Scientific Nomenclature in the Lab
Week 4	Genetic Diversity Measurements and DNA Analysis Techniques
Week 5	Field Survey of Ecosystems (Forest or Agricultural)
Week 6	Biodiversity Assessment in Soil and Water Samples
Week 7	Monitoring Environmental Threats (e.g., Pollution and Biological Invasions)
Week 8	Community Analysis of Biotic Assemblages
Week 9	In-situ and Ex-situ Conservation Techniques
Week 10	Studying the Impact of Climate Change on Biotic Communities
Week 11	Field Visit to High-Biodiversity Areas
Week 12	Data Documentation and Analysis Using Statistical Software
Week 13	Designing Models for Biodiversity Conservation and Sustainable Use
Week 14	Developing Management Plans for Species Protection
Week 15	Presentation and Discussion of Research Findings and Practical Reports
Week 16	Future Directions in Biodiversity Enhancement

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts		Yes
Recommended Texts		No
Websites	Chrome extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.cbd.int/iyb/doc/celebrations/iyb-egypt-agrobiodiversity-ar.pdf	

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.			

Subject Lecturer
Dr. Rand Abdalhade Gazal

Subject Lecturer
Dr. Hesham Saadalden Younes

Head of Department
Khalid Anwar Khaled

Chairman of scientific committee
Dr. Abdalkader Absh Sbak

MODULE DESCRIPTION FORM

Module Information			
Module Title	**BIOSAFETY and SECURITY**	**Module Delivery**	
Module Type	**Basic learning activities**	☒ **Theory** ☒ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**BSS1050**		
ECTS Credits	**3**		
SWL (hr/sem)	**125**		

Module Level	2	**Semester of Delivery**	1
Administering Department	SSWR1969, PLPR1966, HOLA1974, FORE1964, FOSC1965, FICR1973, ANPR1964, AGEC1979, AETT1979, AGME1986	College	AGFO1964
Module Leader	Alla Mohamed Abdullah Omar Dheyaa Mohammed Asmaa Mohammed Adil Moyassar Mohammed Aziz **Nofal Issa Mohamed** sumyia khalaf Badawi Firas Kadhim Dawoo Aljuboori Khaled Anwer Khaled ALKHALED Talal Saeed Hameed Muzahim Saeed Al-Bek	e-mail	ala.mohammed58@uomosul.edu.iq dr.omaralmallah@uomosul.edu.iq asmaama@uomosul.edu.iq moyassar_aziz@uomosul.edu.iq nofelemh@uomosul.edu.iq dr.sumyia_khalf@uomosul.edu.iq firasaljuboori@uomosul.edu.iq khalid.anwar31@uomosul.edu.iq stalal1982@uomosul.edu.iq` muzahim_saeed@uomosul.edu.iq
Module Leader's Acad. Title	Master	**Module Leader's Qualification**	Teacher
Module Tutor	**Dr. Mohammed Ayad Harbawi** **Dr. Rana Saadallah Aziz**	**e-mail**	E-mail: harbawee79@uomosul.edu.iq Rana.saadllah1979@uomosul.edu.iq
Peer Reviewer Name		**e-mail**	E-mail:
Scientific Committee Approval Date	01/02/2025	**Version Number**	1.0

Relation with other Modules			
Prerequisite module		**Semester**	1
Co-requisites module		**Semester**	2

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	1. Equip students with fundamental knowledge of biosafety and biosecurity principles and their practical application in agricultural, forestry, and food-related settings. 2. Enable students to develop the skills necessary to identify, assess, and manage biological hazards, ensuring the protection of human health, the environment, and food products.
Module Learning Outcomes	Important: Write at least 6 Learning Outcomes, better to be equal to the number of study weeks. 1- Interactive lecture 2- Brainstorming 3- Dialogue and discussion 4- Field Training 5- Practical exercises 6- Field project 7- Interactive lectures 8-Brainstorming 9- Self-education The student should be able to: LO#1: Identify common biological hazards in agriculture, forestry, and food sectors, and assess their level of risk. LO#1: Apply biosafety and biosecurity principles and practices in accordance with recognized international standards and levels. LO#1: Design and implement prevention and control programs for biological hazards in laboratories and agricultural/food production facilities. LO#1: Adhere to ethical and legal considerations when handling biological materials, ensuring public health and environmental protection.
Indicative Contents	Indicative content includes the following. Theoretical The course covers the concepts of biosafety and biosecurity, risk assessment, regulations, and safe laboratory techniques, with practical training on using personal protective equipment, sterilization, and waste disposal. It also enhances understanding of emergency response and designing biosecurity protocols in agricultural and food sectors, aiming to ensure worker safety and protect products and the environment. Total hrs = 75 = SSWL - (Exam hrs) = 47-2 = 28 hrs (Time table hrs x 15 weeks)
EE#DS	Indicative content includes the following: Introduction to Soil Physics • Soil as a natural resource. [SSWL=30 hrs] Soil Survey and classification - [SSWL=20 hrs] Revision problem classes [SSWL=6 hrs] Fundamentals [SSWL=44 hrs] Total hrs = 105 = SSWL - (Exam hrs) = 109 - 4 = 105 hr (Time table hrs x 15 weeks)

Learning and Teaching Strategies	
Strategies	- 1. (Interactive Lectures) 2. (Project-Based Learning) 3. (Case Studies) 4. (Workshops and Hands-On Training) 5. (Group Discussions and Presentations)

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

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	**Introduction to Biosafety and Biosecurity**
Week 2	**Types of Biological Hazards in the Agricultural and Food Sectors**
Week 3	**Risk Assessment and Management**
Week 4	**Biosafety Levels and International Standards**
Week 5	**Personal Protective Equipment (PPE) and Safe Work Practices**

Week 6	**Sterilization, Disinfection, and Biological Waste Disposal**
Week 7	Mid-term Exam
Week 8	**Safe Storage, Handling, and Transport of Biological Materials**
Week 9	**Good Laboratory Practices (GLP) and Quality Standards**
Week 10	**Biosecurity in Agriculture and Protection of Plant and Animal Resources**
Week 11	**Emergencies and Rapid Response to Biological Incidents**
Week 12	**Local and International Regulations on Biosafety and Biosecurity**
Week 13	**Ethical Considerations and Dual-Use of Biological Technologies**
Week 14	**Case Studies and Practical Applications in Biosafety and Biosecurity**
Week 15	**Workshops and Simulations for Biosafety Protocol Design**
Week 16	**Comprehensive Review and Final Assessment**

Delivery Plan (Weekly Seminar. Syllabus)	
	Material Covered
Week 1	Introduction to Biosafety and Biosecurity
Week 2	Types of Biological Hazards in the Agricultural and Food Sectors
Week 3	Risk Assessment and Management
Week 4	Biosafety Levels and International Standards
Week 5	Personal Protective Equipment (PPE) and Safe Work Practices
Week 6	Sterilization, Disinfection, and Biological Waste Disposal
Week 7	Safe Storage, Handling, and Transport of Biological Materials
Week 8	Good Laboratory Practices (GLP) and Quality Standards
Week 9	Biosecurity in Agriculture and Protection of Plant and Animal Resources
Week 10	Emergencies and Rapid Response to Biological Incidents
Week 11	Local and International Regulations on Biosafety and Biosecurity
Week 12	Ethical Considerations and Dual-Use of Biological Technologies
Week 13	Case Studies and Practical Applications in Biosafety and Biosecurity
Week 14	Workshops and Simulations for Biosafety Protocol Design
Week 15	Comprehensive Review and Final Assessment

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts		Yes
Recommended Texts	اللجنة الجامعية المركزية للسلامة والامن الكيمياوي والاشعاعي والنووي ومنع الانتشار CBRN	No
Websites	Chromeextension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.uoanbar.edu.iq/eStoreImages/Bank/4661.pdf	

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.

Subject Lecturer
Dr. Mohammed Ayad Harbawi

Subject Lecturer
Dr. Rana Saadallah Aziz

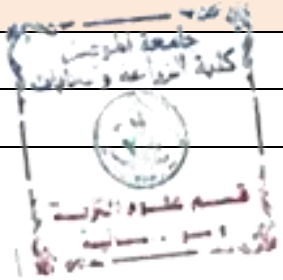
Head of Department
Khalid Anwar Khaled

Chairman of scientific committee
Dr. Abdalkader Absh Sbak

MODULE DESCRIPTION FORM

Module Information					
Module Title	**SUSTANIBLE DEVELOPMENT**			**Module Delivery**	
Module Type	**Core learning activity**			☒Theory ☐Lecture ☐Lab ☐Tutorial ☐Practical ☒Seminar	
Module Code	**SUD1090**				
ECTS Credits	**2**				
SWL (hr/sem)	**125**				
Module Level	2		**Semester of Delivery**	1	
Administering Department	SSWR1969, PLPR1966, HOLA1974, FORE1964, FOSC1965, FICR1973, ANPR1964, AGEC1979, AETT1979, AGME1986		**College**	AGFO1964	
Module Leader	Alla Mohamed Abdullah Omar Dheyaa Mohammed Asmaa Mohammed Adil Moyassar Mohammed Aziz **Nofal Issa Mohamed** sumyia khalaf Badawi Firas Kadhim Dawoo Aljuboori Khaled Anwer Khaled ALKHALED Talal Saeed Hameed Muzahim Saeed Al-Bek		**e-mail**	ala.mohammed58@uomosul.edu.iq dr.omaralmallah@uomosul.edu.iq asmaama@uomosul.edu.iq moyassar_aziz@uomosul.edu.iq nofelemh@uomosul.edu.iq dr.sumyia_khalf@uomosul.edu.iq firasaljuboori@uomosul.edu.iq khalid.anwar31@uomosul.edu.iq stalal1982@uomosul.edu.iq` muzahim_saeed@uomosul.edu.iq	
Module Leader's Acad. Title	Professor		**Module Leader's Qualification**	Ph.D.	
Module Tutor	Ms. Yousef Hasan Yousef Ms. Ahmed Sameer Ganem Mrs. Aleaa Abdullatif Jasem		**e-mail**	N.A.	
Peer Reviewer Name	Assistant Professor - Professor		**e-mail**	N.A.	
Scientific Committee Approval Date	19/1/2025		**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. Understand the concept of sustainable development and its various dimensions. 2. Analyze the impact of environmental and social changes on achieving sustainability. 3. Study the role of government policies and innovation in supporting sustainable development. .4Raise awareness of the importance of achieving social justice within the goals of sustainability.
Module Learning Outcomes	1. Interpret the concepts and goals of sustainable development. 2. Assess the impact of climate and policies on resource sustainability. 3. Analyze the role of education and technology in achieving sustainable development. .4Propose innovative strategies to enhance sustainability in various sectors.
Indicative Contents	1. Introduction to the Sustainable Development Goals and Global Challenges. 2. Natural Resource Management and Climate Change. 3. Policies Supporting Sustainability in the Fields of Energy and Agriculture. .4Innovation and Social Justice in Achieving a Sustainable Future. Total hrs = 62 = SSWL - (Exam hrs) = 62-2= 60 (Time table hrs x 15 weeks)

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
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. .1

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	3	15% (15)	3, 9 ,11	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects	1	10% (10)	Continuous	All
	Report	1	5% (5)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Theory Syllabus)

	Material Covered
Week 1	Introduction to Sustainable Development
Week 2	Economic, Social, and Environmental Dimensions of Sustainable Development
Week 3	History and Evolution of the Concept of Sustainable Development
Week 4	(Sustainable Development Goals (SDGs
Week 5	Sustainability in Natural Resource Management
Week 6	Climate Change and Its Impact on Sustainable Development
Week 7	Midterm Exam
Week 8	The Role of Education and Awareness in Achieving Sustainable Development
Week 9	Renewable Energy and Sustainability
Week 10	Sustainability in the Agricultural and Food Sector
Week 11	Government Policies and Their Role in Achieving Sustainable Development
Week 12	Innovation and Technology in Supporting Sustainability
Week 13	Social Justice and Equality in Sustainable Development
Week 14	Global Challenges Facing Sustainable Development
Week 15	The Future of Sustainable Development
Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly practical Syllabus)	
	Material Covered
Week 1	.Introduction to sustainable development goals.
Week 2	Study of sustainable economic and social foundations.
Week 3	Workshop on sustainability applications in local projects.
Week 4	.Analysis of environmental challenges and opportunities in sustainable development.
Week 5	Case study on sustainable resource management.
Week 6	Analyzing the role of technology in supporting sustainability.
Week 7	Midterm Exam
Week 8	Workshop on sustainable water and energy management.
Week 9	Discussing strategies for sustainable agriculture improvement.
Week 10	.Evaluating eco-friendly development projects.
Week 11	Understanding sustainable practices in the construction sector.
Week 12	Case study on renewable energy usage.
Week 13	Practical: Developing a business model for a sustainable project.
Week 14	.Discussion on sustainability challenges in developing communities.
Week 15	Project presentations and discussions on feasibility and conclusions.

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts	عمر بن اخضر خلفاوي " التنمية المستدامة"	no
Recommended Texts	عبدالله بن عبد الرحمن البريدي " التنمية المستدامة : مدخل تكاملي لمفاهيم الاستدامة وتطبيقاتها"	
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.			

Subject Lecturer
Ms. Yousef Hasan Yousef

Subject Lecturer
Ms. Ahmed Sameer Ganem

Subject Lecturer
Mrs. Aleaa Abdullatif Jasem

Head of Department
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