

MODULE DESCRIPTION FORM

Module Information			
معلومات المادة الدراسية			
Module Title	BIOSAFETY and SECURITY		Module Delivery
Module Type	Support learning activity		<input checked="" type="checkbox"/> Theory <input type="checkbox"/> Lecture <input checked="" type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	BSS1050		
ECTS Credits	3		
SWL (hr/sem)	75		
Module Level	1	Semester of Delivery	
Administering Department	SSWR1969, PLPR1966, HOLA1974, FORE1964, FOSC1965, FICR1973, ANPR1964, AGE1979, AETT1979, AGME1986	College	AGFO1964
Module Leader	zwaid fathiy abd Omar Dheyaa Mohammed Asmaa Mohammed Adil Moyassar Mohammed Aziz Nofal Issa Mohamed Taha Mohammed Taki Firas Kadhim Dawoo Aljuboori Khaled Anwer Khaled ALKHALED Talal Saeed Hameed Sumood Husain Ai Al-Hadedy	e-mail	zu-kh1985@uomosul.edu.iq dr.omaralmallah@uomosul.edu.iq asmaama@uomosul.edu.iq movassar_aziz@uomosul.edu.iq nofelemh@uomosul.edu.iq tahataqi@uomosul.edu.iq frasaljuboori@uomosul.edu.iq khalid.anwar31@uomosul.edu.iq stalal1982@uomosul.edu.iq sumod_husain@uomosul.edu.iq
Module Leader's Acad. Title	Professor Assistant Professor	Module Leader's Qualification	Ph.D. MSc.
Module Tutor	Khaled Hadi Mustafa	e-mail	khmm9191@uomosul.edu.iq
Peer Reviewer Name	Ahmed Mohammed Thabet Qasim	e-mail	ahmed.alniemy@uomosul.edu.iq
Scientific Committee Approval Date	15/10/2024	Version Number	1.0

Relation with other Modules			
Prerequisite module	ACE1020	Semester	1
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives	<ol style="list-style-type: none"> 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 LOs	<p>The student should be able to:</p> <p>LO#1: Identify common biological hazards in agriculture, forestry, and food sectors, and assess their level of risk.</p> <p>LO#2: Apply biosafety and biosecurity principles and practices in accordance with recognized international standards and levels.</p> <p>LO#3: Design and implement prevention and control programs for biological hazards in laboratories and agricultural/food production facilities.</p> <p>LO#4: Adhere to ethical and legal considerations when handling biological materials, ensuring public health and environmental protection.</p>
Indicative Contents	<p>Indicative content includes the following.</p> <p><u>Theoretical</u></p> <p>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.</p> <p>Total hrs = 75 = SSWL - (Exam hrs) = 47-2 = 28 hrs (Time table hrs x 15 weeks)</p>

Learning and Teaching Strategies	
Strategies	<ol style="list-style-type: none"> 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)	47	Structured SWL (h/w)	3
Unstructured SWL (h/sem)	28	Unstructured SWL (h/w)	2
Total SWL (h/sem)	75		

Module Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative	Quizzes	2	10% (10)	4 and 11	LO#1 and LO#2

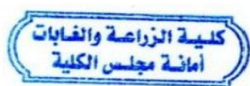
assessment	Home Assignments	2	10% (10)	2 and 13	LO#1 and LO#3
	College Assignments	2	10% (10)	All	All
	Report	1	10% (10)	14	LO#1, LO#2 and LO#4
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO#1, LO#2 and LO#3
	Final Exam	2hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	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

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Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	Basics of Biological and Occupational Safety in Laboratories and Scientific Institutions / Ministry of Higher Education - University of Kufa / College of Agriculture - Department of Food Sciences.	-
Recommended Texts	Biosafety and Biosecurity Training and Education Materials/Biorisk Management Guide May 2020 - This guide was issued in cooperation with the Ministry of Higher Education and the Iraqi Ministry of Health.	-
Websites		

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



الدكتور
مكي محمد علي
رئيس قسم وقاية النباتات



أ.د. هادي محمد
رئيس اللجنة العلمية