

MODULE DESCRIPTION FORM

Module Information			
Module Title	BIOSAFETY and SECURITY		Module Delivery
Module Type	Basic learning activities		<input checked="" type="checkbox"/> Theory <input checked="" 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)	125		
Module Level	2	Semester of Delivery	
Administering Department	SSWR1969, PLPR1966, HOLA1974, FORE1964, FOSC1965, FICR1973, ANPR1964, AGECE1979, 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 frasaljuboori@uomosul.edu.iq khalid.anwar31@uomosul.edu.iq stalal1982@uomosul.edu.iq muzahim_saeed@uomosul.edu.iq
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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	<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	<p>Important: Write at least 6 Learning Outcomes, better to be equal to the number of study weeks.</p> <ol style="list-style-type: none"> 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 <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#1: Apply biosafety and biosecurity principles and practices in accordance with recognized international standards and levels.</p> <p>LO#1: Design and implement prevention and control programs for biological hazards in laboratories and agricultural/food production facilities.</p> <p>LO#1: 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>
EE#DS	<p>Indicative content includes the following:</p> <p><u>Introduction to Soil Physics</u></p> <ul style="list-style-type: none"> • Soil as a natural resource. [SSWL=30 hrs] <p>Soil Survey and classification - [SSWL=20 hrs]</p> <p>Revision problem classes [SSWL=6 hrs]</p> <p>Fundamentals [SSWL=44 hrs]</p> <p>Total hrs = 105 = SSWL - (Exam hrs) = 109 - 4 = 105 hr (Time table hrs x 15 weeks)</p>

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)		

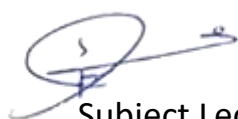
Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	Introduction to Biosafety and Biosecurity
Week 2	Types of Biological Hazards in the Agricultural and Food Sectors
Week 3	Risk Assessment and Management
Week 4	Biosafety Levels and International Standards
Week 5	Personal Protective Equipment (PPE)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

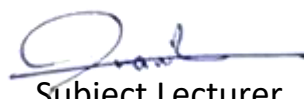
Delivery Plan (Weekly Seminar. Syllabus)	
	Material Covered
Week 1	Introduction to Biosafety and Biosecurity
Week 2	Types of Biological Hazards in the Agricultural and Food Sectors
Week 3	Risk Assessment and Management
Week 4	Biosafety Levels and International Standards
Week 5	Personal Protective Equipment (PPE) and Safe Work Practices
Week 6	Sterilization, Disinfection, and Biological Waste Disposal
Week 7	Safe Storage, Handling, and Transport of Biological Materials
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Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts		Yes
Recommended Texts	اللجنة الجامعية المركزية للسلامة والامن الكيميائي 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.			



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Head of Department

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