MODULE DESCRIPTION FORM

Module Information					
Module Title	**BIOSAFETY and SECURITY**			**Module Delivery**	
Module Type	**Suport learning activity**			☒ **Theory** ☐ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**BSS1050**				
ECTS Credits	3				
SWL (hr/sem)	75				
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	**Professor** **Assistant Professor**	**Module Leader's Qualification**		Ph.D. M.Sc.	
Module Tutor	Ebtisam Esmaael Ahmeed	**e-mail**	ebtisamesmaael@uomosul.edu.iq		
Peer Reviewer Name		**e-mail**			
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	
Module Objectives	1- 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	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#2: Apply biosafety and biosecurity principles and practices in accordance with recognized international standards and levels. LO#3: Design and implement prevention and control programs for biological hazards in laboratories and agricultural/food production facilities. LO#4: 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.

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)	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 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 / Lab.	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)	
	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	**Preparatory week before the final Exam**

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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	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			
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.