



Course Syllabus

1	Course title	Insect-Plant Relationship	
2	Course number	606955	
3	Credit hours	3	
	Contact hours (theory, practical)	3	
4	Program title	PhD In Plant protection	
5	Program code		
6	School	School of Agriculture	
7	Department	Department of Plant protection	
9	Course level	PhD	
10	Year of study and semester (s)	Second semester (2022/2023)	
11	Other department (s) involved in teaching the course	/	
13	Main teaching language	English	
14	Delivery method	X Face to face learning <input type="checkbox"/> Blended <input type="checkbox"/> Fully online	
14	Online platforms(s)	<input type="checkbox"/> Moodle X Microsoft Teams <input type="checkbox"/> Skype <input type="checkbox"/> Zoom	
15	Issuing/Revision Date	26.02.2023	

17 Course Coordinator:

Name: Prof. Lara Ramzi Jaber	Contact hours: 10:30-11:30 Sunday, Tuesday, Thursday
Office number: 268	Phone number: 22514 Email: L.jaber@ju.edu.jo

18 Other instructors:

19 Course Description:

As stated in the approved study plan.

The course describes insect finding of a host plant, feeding on plants, toxic substances in plants. It also emphasizes on host plant resistance to insects



20 Course aims and outcomes:

A- Aims:

1. To understand how plants and insects have directly and indirectly affected each other's evolution
2. To learn about the highly intricate antagonistic and mutualistic interactions that have evolved between plants and insects, in both basic and applied contexts
3. To gain an appreciation for the fundamental importance of these interactions to the function and conservation of natural ecosystems, the management of pests and invasive species, decisions regarding the use of biocontrol agents and genetically-modified crops, etc.
4. To examine some of the applied issues related to insect-plant interactions such as, insect roles in ecosystem services, pest management, conservation and assessing the methodology of host plant resistance breeding

B- Students Learning Outcomes (SLOs):

Upon successful completion of this course, students will be able to:

PLOs	1	2	3	4	5	6	7	8
SLOs of the course								
A1- learn about the ways of insect and plant direct and indirect interactions	√	√						√
A2- realize and appreciate the importance of insect-plant interactions and how they can be manipulated in order to benefit from beneficial ones and reduce harmful ones								
B1- obtain more specific knowledge and details on how insects may interact with plants negatively (Herbivory) and positively (Mutualism)	√	√	√					√
B2- understand and correlate those interactions to potential benefit and/or damage caused to crops by insects								
C1- realize and analyze how to apply antagonistic and mutualistic insect-plant interactions for conserving agricultural and natural ecosystems or solving pest problems	√	√	√			√		√
D1- apply knowledge on antagonistic and mutualistic insect-plant interactions for effective pest management or as ecosystem services		√	√	√	√	√		√

PLOS

After the successful completion of this program student should be able to:

1. Implement the advanced concepts and processes in various disciplines in Plant Protection.
2. Extract information and findings of science from literature in Plant Protection.
3. Plan, conduct and analyze the results of scientific research.
4. Communicate effectively with his supervisors and colleagues orally and in writing.
5. Employ expertise and skills gained in the development production, research, and extension on different levels in the public and private sectors in Jordan and worldwide.



6. Engage efficiently in a scientific team work.
 7. Publish research in the field of Plant Protection in peer-reviewed scientific journals.
 8. Commit to ethics and compliance responsibilities for being an agricultural engineer, especially with regard to agricultural sector, environment and society.

21. Topic Outline and Schedule:

Week	Lecture	Topic	Intended Learning Outcome	Learning Methods	Platform	Synchronous / Asynchronous Lecturing	Evaluation Methods	Resources
1-2	1.1	1. Introduction to insect-plant interactions	A1-A2	Face to Face		Synchronous	Participation + assignments + Mid & final	A1, A2, A3 B1, B2
	2.2							
3-6	3.1	2. Herbivory 1. Introduction to herbivory 2. Herbivore diet breadth 3. Host-plant selection 4. Anti-herbivore protection	A1, A2, B1, B2,	Face to Face		Synchronous	Participation + assignments + Mid & final	A1, A2, A3 B1, B2
	6.2							
7-10	7.1	3. Mutualism 1. Pollination 2. Ant-plant interactions	A1, A2, B1, B2, C1, D1	Face to Face		Synchronous	Participation + assignments + Mid & final	A1, A2, A3 B1, B2
	10.2							
11-14	11.1	4. Community aspects of insect-plant interactions 5. How to apply the knowledge?	A1, A2, B1, B2, C1, D1	Face to Face		Synchronous	Mid & final	A1, A2, A3 B1, B2
	14.2							



22 Evaluation Methods:

Opportunities to demonstrate achievement of the SLOs are provided through the following assessment methods and requirements:

Evaluation Activity	Mark	Topic(s)	SLOs	Period (Week)	Platform
Participation + assignments + Term paper + presentation	30	All topics	A1, A2, B1, B2, C1, D1	At the end of each topic	
Midterm exam	30	Weeks 1-8	A1, A2, B1, B2, C1, D1	26.11.2020	
Final exam	40	All topics	A1, A2, B1, B2, C1, D1	Will be announced later	

23 Course Requirements

students should have a computer, internet connection,

24 Course Policies:

- A- Attendance policies:
<15% , <20% with a permission ; medical report
- B- Absences from exams and submitting assignments on time:
 - **Assignments will not be accepted after deadline**
 - **Absence of exams with a medical report must be submitted following regulations and a makeup exam will be scheduled within one week**
- C- Health and safety procedures:
 - **Mask must be worn all the time in class and lab**
 - **Social distancing**
- D- Honesty policy regarding cheating, plagiarism, misbehavior:
- E- Grading policy:

From (%)	To (%)	Scale	Mark	Result
0	54	0	C	Fail
55	59	2.5	C+	Good
60	64	2.75	B-	Very Good
65	74	3	B	Very Good



75	79	3.5	B+	Very Good
80	85	3.75	A ⁻	Excellent
86	100	4	A	Excellent

F- Available university services that support achievement in the course:

25 References:

A. Required book (s), assigned reading and audio-visuals:

Text Books:

1. Schoonhoven L M, J J A van Loon, and M Dicke (2006) *Insect-plant Biology*. Oxford University Press
2. Herrera C M, Pellmyr Olle (2002) *Plant Animal Interactions: An Evolutionary Approach*. Wiley-Blackwell
3. Bernays E A, Chapman R F (1994) *Host-plant selection by phytophagous insects*. Springer

B. References:

1. Selected papers from classic and current literature
2. Websites

26 Additional information:

Name of Course Coordinator: Prof. Lara Ramzi Jaber Signature: LRJ Date: 23/12/2024
Head of Curriculum Committee/Department: ----- Signature: -----
Head of Department: ----- Signature: -----
Head of Curriculum Committee/Faculty: ----- Signature: -----
Dean: ----- Signature: -----