

Course E-Syllabus

1	Course title	Insects Structure and Function
2	Course number	0606715
3	Credit hours	3
	Contact hours (theory, practical)	3 lectures per week
4	Prerequisites/corequisites	
5	Program title	Plant Protection
6	Program code	
7	Awarding institution	The University of Jordan
8	School	School of Agriculture
9	Department	Department of Plant Protection
10	Level of course	MSc
11	Year of study and semester (s)	1st semester 2022-2023
12	Final Qualification	
13	Other department (s) involved in teaching the course	
14	Language of Instruction	English
15	Teaching methodology	<input type="checkbox"/> Blended <input checked="" type="checkbox"/> Online
16	Electronic platform(s)	<input type="checkbox"/> Moodle <input checked="" type="checkbox"/> Microsoft Teams <input type="checkbox"/> Skype <input type="checkbox"/> Zoom <input type="checkbox"/> Others.....
17	Date of production/revision	10/10/2022

18 Course Coordinator:

Name: Prof. Ahmad Katbeh
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Phone number: 22521
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19 Other instructors:

20 Course Description:

The course aims to give students advanced knowledge about the external morphology, the internal anatomy of insects, and the functions of the different organs and systems.

21 Course aims and outcomes:

A- Aims:

1. Study the external morphological structures of insects and their functions.
2. Study the internal structures and their functions.
3. Study reproduction, hormones, metamorphosis, blood of insects and other physiological functions.

B- Intended Learning Outcomes (ILOs):

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

A) Knowledge and Understanding:

A1) The basic insect morphology and anatomy of the different internal system.

B) Intellectual Skills (Cognitive and Analytical)

B1) Recognize the functions of the different insect's structures and organs.

C) Subject Specific Skills:

C1) Study the external morphology and internal organs of insects.

D) Transferable Skills:

D1) Recognize the morphological and anatomical features of insect.

PLOs \ SLOs of the course	1	2	3	4	5	6	7	8
A1. The basic insect morphology and anatomy of the different internal system.	√	√	√	√	√	√	√	√
B1. Recognize the functions of the different insect's structures and organs.	√	√	√		√		√	√
C1. Study the external morphology and internal organs of insects.	√	√	√		√	√	√	√
D1. Recognize the morphological and anatomical features of insect.	√	√	√		√		√	√

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.

22. Topic Outline and Schedule:

No. of lecture (s) /Week	Topic	Student Learning Outcome	Learning Methods (Face to Face/Blended/ Fully Online)	Platform	Evaluation Methods**	Resources
2 (1st wk)	Introduction, Morphology of head	A1, B1, C1, D1	Synchronous lecturing on Microsoft teams		Exams, presentations, and term paper	Chapter 1 and 2 in The Insects: Structure and Function
2 (2 nd wk)	Thorax, and abdomen and their appendages.	A1, B1, C1, D1	Synchronous lecturing on Microsoft teams		Exams, presentations, and term paper	Chapter 7 and 8 in The Insects: Structure and Function
2 (3 rd wk)	Integument	A1, B1, C1, D1	Synchronous lecturing on Microsoft teams		Exams, presentations, and term paper	Chapter 16 in The Insects: Structure and Function
2 (4 th wk)	Tracheal System	A1, B1, C1, D1	Synchronous lecturing on Microsoft teams		Exams, presentations, and term paper	Chapter 17 in The Insects: Structure and Function
2 (5 th wk)	Alimentary Canal	A1, B1, C1, D1	Synchronous lecturing on Microsoft teams		Exams, presentations, and term paper	Chapter 3 in The Insects: Structure and Function
2 (6 th wk)	Digestion and Absorption	A1, B1, C1, D1	Synchronous lecturing on Microsoft teams		Exams, presentations, and term paper	Chapter 3 in The Insects: Structure and Function
2 (7 th wk)	Circulatory System	A1, B1, C1, D1	Synchronous lecturing on Microsoft teams		Exams, presentations, and term paper	Chapter 5 in The Insects: Structure and Function
2 (8 th wk)	Nervous System	A1, B1, C1, D1	Synchronous lecturing on Microsoft teams		Exams, presentations, and term paper	Chapter 20 in The Insects: Structure and Function
2 (9 th wk)	Muscles	A1, B1, C1, D1	Synchronous lecturing on Microsoft teams		Exams, presentations, and term paper	Chapter 10 in The Insects: Structure and

						Function
2 10th wk	Reproduction, Embryology	A1, B1, C1, D1	Synchronous lecturing on Microsoft teams		Exams, presentations, and term paper	Chapters 12,13,14 in The Insects: Structure and Function
2 (11thwk)	Metamorphosis	A1, B1, C1, D1	Synchronous lecturing on Microsoft teams		Exams, presentations, and term paper	Chapter 15 in The Insects: Structure and Function
2 (12thwk)	Diapause, Biological Clocks	A1, B1, C1, D1	Synchronous lecturing on Microsoft teams		Exams, presentations, and term paper	Chapter 15 in The Insects: Structure and Function
2 (13 wk)	Endocrinology	A1, B1, C1, D1	Synchronous lecturing on Microsoft teams		Exams, presentations, and term paper	Chapter 21 in The Insects: Structure and Function
2 (14 wk)	Student Presentations	A1, B1, C1, D1	Synchronous lecturing on Microsoft teams		Exams, presentations, and term paper	
2 (15-16 wk)	Revision	A1, B1, C1, D1	Synchronous lecturing on Microsoft teams		Exams, presentations, and term paper	

- Teaching methods include: Synchronous lecturing/meeting; Asynchronous lecturing/meeting
- Evaluation methods include: Homework, Quiz, Exam, pre-lab quiz...etc

23 Evaluation Methods:

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

Evaluation Activity	Mark	Topic(s)	Period (Week)	Platform
Midterm Exam	30%	Lecture materials	One month after the beginning of semester	Microsoft teams
Presentation	15%	According to the selected topic	Stars last months of semester	Microsoft teams
Term Paper	15%	According to the selected topic	One week before the finals	Microsoft teams

Final Exam	40%	Lecture materials	Will be announced by Registration Dept.	Microsoft teams
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24 Course Requirements (e.g: students should have a computer, internet connection, webcam, account on a specific software/platform...etc):

computer, internet connection, webcam

25 Course Policies:

- A- Attendance policies: According to the UJ regulations
- B- Absences from exams and submitting assignments on time: According to the UJ regulations
- C- Health and safety procedures: According to the UJ regulations
- D- Honesty policy regarding cheating, plagiarism, misbehavior: According to the UJ regulations
- E- Grading policy: According to the UJ regulations
- F- Available university services that support achievement in the course: Microsoft teams accounts

26 References:

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

Chapman, R. F. Latest edition. The Insects: Structure and Function. The English Language Book Society.

B- Recommended books, materials, and media:

Wigglesworth, F. R. S. Latest edition. The Principles of Insect Physiology. The English Language Book Society.

Paper in entomology journals such as:

Annual Review of Entomology
 Insect Biochemistry
 Journal of Insect Physiology
 Advances in Insect Physiology
 Journal of Comparative Physiology

27 Additional information:

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Name of Course Coordinator: Ahmad Katbeh -Signature: *Ahmad Katbeh* Date: 19/12/2024

Head of Curriculum Committee/Department: ----- Signature: -----

Head of Department: ----- Signature: -----

Head of Curriculum Committee/Faculty: ----- Signature: -----

Dean: ----- Signature: -----