



SYLLABUS

Course Code	Course Num	Course Name	Credit Hours	.Lec	.Lab	.Tut	Private study	requisites-Pre	Course Level	Teaching Language
BIO	353	Entomology	4	3	2	0	6	252BIO	6	English

A. Description Course

An introduction to the entomology. Designed to acquaint students with our dependence on and interaction with insects in today's world. Biology of insects, including evolution and diversity, anatomy and physiology, behavior, ecology, insects as medical and agricultural pests, and insects as beneficial organisms. Laboratory sessions are devoted primarily to the identification of major families of insects, study exterior shape typical insect, anatomy of typical insects to get to know various internal organs, various appendages of body and its modifications and histological examination of the parts of the gastrointestinal tract.

B. Outcomes Course

On successfully completing this course , students will be expected:

1. To appreciate the value and importance of insects.
2. To learn about the classification, biology, ecology, behaviour, and control of insects.
3. To identify major orders and families of insects and acquire their general characteristics.
4. To acquire practical skills in collecting, mounting, preserving insects for scientific study.
5. To understand the general external and internal anatomy and physiology insects.
6. To appreciate the impacts of insects on humans and the environment.

C. :References

Required Textbook

- *Howard E. Evans Insect Biology: A Textbook of Entomology* ISBN-13: 978-0201119817.
- *P. J. Gullan The Insects: An Outline of Entomology*; 3rd Edition ISBN-13: 978-1405111133.
- *William S. Romoser The Science of Entomology*; 4th Edition ISBN-13: 978-0697228482

:Other references

- *Rtiplehorn, C.A .and Johnson, N.F.(2005)*. *Borrer and DeLong's Introduction to the study of insects*.7th Edition. .US ,Thomson Brooks / Cole
- *Chapman. R.F.(1982)*.*The Insects :Structure and function* .Cambridge, Massachusettes, Harvard University. .Press

Course Website: Google Classroom Webpage: <http://www.imamm.org/>



D. Topics Outline

topics Lectures .1D

1. **Insects position in the animal kingdom**, General traits of Insects; the reasons for enormous proliferation of insects
2. **The body wall**: Structure and its characteristics; study of Metamorphosis process.
3. **Study parts of the body** and its extensions and various modifications study of head, antennae, and mouth parts.
4. **Chest study**: its composition, legs, movement, Wings, aviation and mechanical factors affecting it.
5. **Study abdomen**: abdominal appendages and non-genital and Genital.
6. **Study the structure of various organs** in the body of the insect including: Digestive system: the gut and its supplementaries; Process of food and nutrition needs.
7. **Circulatory system**: blood vessel, blood circulation, and blood cells, blood clot.
8. **Respiratory system**: the structure of bronchial device, operation of breathing in terrestrial, aquatic and parasitic insects.
9. **Nervous system**: its divisions, nerve conduction, the members of the Sense, mechanical and chemical receptors, members of hearing and vision.
10. **Muscular system**: muscle types, their structure.
11. **Excretory system**: excretory organs and excretory process.
12. **Reproductive system**: its structure, methods of reproduction.
13. **A brief study of the growth** after embryonic including types of transformation.
14. **Study the types of larvae and pupae in insects.**

Laboratories topics .2D

1. **Introduction** includes the identification of the syllabus and security and safety precautions.
2. **Study exterior** shape typical insect like cockroach.
3. **Various appendages of body and its modifications**: mouth parts, Antennae, legs, wings,, growths Abdomen.
4. **Anatomy of typical insects** to get to know Various internal organs: Digestive, Circulatory Excretory, Nervous, Reproductive.
5. **Histological examination** of the parts of the gastrointestinal tract.
6. **Study examples** illustrate the shift of the types of insects study after embryonic growth.
7. **Study the types of larvae and pupae.**

E. Hours Office

Office hours give students the opportunity to ask in-depth questions and to explore points of confusion or interest that cannot be fully addressed in class.



F. System Exams & Grading

The semi-official dates of the exams for this course are:

- **Midterm 1:** 6th or 7th week.
- **Midterm 2:** 11th or 12th week.
- **Quizzes & Homeworks:** During the semester.
- **Final lab. Exam :** 14th or 15th week.
- **Final Exam :** 16th week.

Your course grade will be based on your semester work as follows:

% 15 :1Midterm	% 15 :2Midterm	%20Final lab. Exam:	% 40Final Exam:
% 10Homework, Attendance & Participation: 2 ,Quizzes 2			

The grading distribution

+A	A	+B	B	+C	C	+D	D	F
[100 ,95]	(95 ,90]	(90 ,85]	(85 ,80]	(80 ,75]	(75 ,70]	(70 ,65]	(65 ,60]	(60 ,0]

G. Student workload

#	Teaching/Learning activities	Contact hours	Frequency	Total contact hours	-Self study hours	Total study-self hours	Student learning time
٥	Lecture	٣	١٥	٤٥	٢	٣٠	٧٥
٢	Tutorial	٠	٠	٠	٠	٠	٠
٠	practical\Lab	٢	١٥	٣٠	١	١٥	٤٥
٥	Homework	٠	٤	٠	٢	٨	٨
٤	Quiz	٠.٥	٢	١	١	٢	٣
٦	Midterm	١.٥	٢	٣	٥	١٠	١٣
٧	Final Exam	٢	١	٢	١٢	١٢	١٤
Total				٨١		٧٧	١٥٨

H. Attendance/Absence Student

Only three situations will be considered as possible excused absences:

- Occurrence of a birth or death in the immediate family will be excused. ("Immediate family" is defined by the University as spouse, grandparents, parents, brother, or sister).
- Severe illness in which a student is under the care of a doctor and physically unable to attend class will be excused. Students are not excused for a doctor's appointment. Do not make



appointments that conflict with rehearsals. alth Center will be Notes from the University He
.accepted

[Executive Rules for Study Regulations and Exams](#)

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