



Course Specification

Course title: Insect Physiology (B)

Code: Ent. 443

Program (s) on which the course is given: Entomology (Special)

Element of programs : Major - Single Double

Department offering the program: Zoology Department

Department offering the course: Zoology Department

Academic year: 4th year – 1st semester

Date of specification approval: 1/2016

A- Basic information

Academic year: 4 th	Course title: Insect Physiology (B)	Code: Ent. 443
Lecture: 4 hr/wk	Practical: 4 hr/wk	Tutorial: 0 hr/wk
		Total: 8 hr/wk

B- Professional information

1- Overall aims of course	<p>This course aims to provide student with knowledge and understanding of:</p> <ol style="list-style-type: none"> 1- Normal functions of different body systems and physiological aspects of insects. 2- Dealing with scientific data in Arabic and English. 3- Utilizing scientific facts and theories to analyze and interpret practical data.
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2-Intended learning outcomes of course (ILOs)

a-Knowledge and understanding	<p>By the end of the course, students should be able to:</p> <ol style="list-style-type: none"> a1. Illustrate the processes and mechanisms supporting the structure and function of insect's systems. a2. Illustrate the physiological aspects of insects in different
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	environments.
b-Intellectual skills	By the end of the course, students should be able to: b1. Analyze data within a theoretical framework. b2. Select the proper mechanism for setting data within a suitable framework. b3. Summarize information critically in a short report..
c- Professional and practical skills	By the end of the course, students should be able to: c1. Conduct laboratory investigations of living systems in responsible, safe and ethical manner. For example, students must pay attention to risk assessment, relevant health and safety regulation.
d- General and transferable skills	By the end of the course, students should be able to: d1. Share scientific ideas, give oral presentations and work in a group and communicate with others positively.

3- Contents:

Topic	No. Hours/ week			
	Lecture	Practical	Tutorial	Total
1- Postembryonic development and growth in insects 2- Neurosecretory cells and endocrine. Organs. 3- Mode of action and function of hormones. 4-Reproductive organs (structure and function). 5-The circulatory system (structure and function). 6-Haemolymph, types and function of hemocytes. 7-The structure of nervous system. 8-Physiology of nervous system. 9-Conduction of nerve impulse. 10-The muscular system (structure and function).	4	4	0	8

4- Teaching and learning methods

4.1. Teaching lectures 4.2. laboratory lessons (practical examination to the biological samples) 4.3. Brainstorming 4.4 self-learning
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5- Student assessment:

5.1. Methods	5.1.1. Written exam (short & final)	- To assess: knowledge & understanding - Intellectual skills
	5.1.2. Oral exam	- To assess: knowledge & understanding - Intellectual skills
	5.1.3. Practical exam	- To assess: Professional & practical skills
	5.1.4. Semester work	- To assess: General & transferable skills
5.2. Assessment schedule	Assessment 1: Short exam Final written exam	- Along the term - Week14
	Assessment 2: Oral exam	- Week: 8-9
	Assessment 3: Final lab exam	- Week: 10
	Assessment 4: Activities	- Week: 4-8
5.3. weighting of assessments	Final written exam %	50%
	Final lab exam %	30%
	Semester work & short exam %	11.5%
	Activities	2.5%
	Oral exam %	6%
	Total %	100%

6-List of references

6.1. Course Note (If available)	_____
6.2. Text Book	<ul style="list-style-type: none"> ❖ Chapman, R.F. (Reginald Frederick). The insects: structure and function/ R.F. Chapman. 4th ed. (1988). ❖ Wigglesworth, V.B. (1972). The principles of insect physiology. London: Methuen. ❖ Gerald Thomas books : Chemistry and Physiology of insects.
6.3. Additional References	_____
6.4. Periodical Journals,..... etc.	_____

7- Facilities required for teaching and learning

<p>7.1. different types of microscopes.</p> <p>7.2. whiteboard.</p> <p>7.3. samples loaded onto a glass slide.</p> <p>7.4. course note.</p> <p>7.5. living samples of insects.</p>
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8- Matrix between course specification ILOs and ILOs of Entomology (Special) program

Knowledge and understanding		Intellectual skills		Professional and practical skills		General and transferable skills	
ILOs of course	ILOs of program	ILOs of course	ILOs of program	ILOs of course	ILOs of program	ILOs of course	ILOs of program
a1	A3	b1	B8	c1	C7	d1	D4
a2	A9	b2	B8				
		b3	B10				

9- Curriculum map

Contents	Weeks	Course ILOs				Teaching & learning methods	Assessment methods	Evidence
		a	b	c	d			
1- Postembryonic development and growth in insects 2- Neurosecretory cells and endocrine. Organs. 3- Mode of action and function of hormones.	1-3	a1 & a2	b1, b2 & b3	c1	d1	Lectures	- Short & final written exams - Practical exam - Oral exam - Semester work	- Course file - Exam. on paper
4-Reproductive organs (structure and function). 5-The circulatory system (structure and function). 6-Haemolymph, types and function of hemocytes.	4-6	a1 & a2	b1, b2 & b3	c1	d1	Lectures & practical labs	- Activities	
7-The structure of nervous system. 8-Physiology of nervous system. 9-Conduction of nerve impulse. 10-The muscular system (structure and function).	7-10	a1 & a2	b1, b2 & b3	c1	d1	Lectures & practical labs		

Course coordinator:

Name: Prof. Dr. Mostafa Amin Taha

Head of Zoology Department:

Prof. Dr. Zinab Aid