



Course Specification

Course title: Economic entomology Code: Ent. 481

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

Element of program : Major - Single Double

Department offering the program: Zoology Department

Department offering the course: Zoology Department

Academic year: 4th year – 2nd semester

Date of specification approval: 1/2016

A- Basic information

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|---------------------------------------|--|--------------------------|
| Academic year: 3 rd | Course title: Economic entomology | Code: Ent. 481 |
| Lecture: 4 hr/wk | Practical: 4 hr/wk | Tutorial: 0 hr/wk |
| | | Total: 8 hr/wk |

B- Professional information

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| 1- Overall aims of course | <p>This course aims to provide student with knowledge and understanding of:</p> <ul style="list-style-type: none"> - Acquiring the theoretical background and experience of laboratory and field work. - Differentiation between beneficial and harmful effects of different insect families and species, preparing them for future career in entomological fields. |
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2-Intended learning outcomes of course (ILOs)

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| a-Knowledge and understanding | <p>By the end of the course, students should be able to:</p> <p>a1- Characterize the relation between harmful and beneficial insect and the environment</p> <p>a2 - Identify the harmful and beneficial insects and numerate the characteristic habitat features of the economic insects</p> |
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| b-Intellectual skills | By the end of the course, students should be able to: b1- Select the subject-related knowledge to solve problems and understanding of harmful insects to help in control it. b2- Assess the interrelationships between harmful and beneficial insects and its ecosystem b3- Maintain the prevention and control of the studied parasites infecting various hosts in their life |
| c- Professional and practical skills | By the end of the course, students should be able to: c1- Use techniques and tools for studying harmful and beneficial insect samples in laboratory or field to carry out certain experiment. c2- Prepare a representative sample in the laboratory to study beneficial and harmful insects . |
| d- General and transferable skills | By the end of the course, students should be able to: d1- Use recent communication and information technologies, knowledge, models and tools effectively in different tasks related to entomology d2- Identify roles and responsibilities of entomologists in the environments. d3- Use effectively scientific models, systems and tools to identify economic insects. |

3- Contents:

| Topic | No. of hours | Lecture | Tutorial/practical |
|---|---------------------|----------------|---------------------------|
| Pest Definitions a. Definitions b. Development of pest status | 4 | 4 | 0 |
| Damage caused by Insects a. Indirect damage b. Direct damage | 4 | 4 | 0 |
| Cotton Pests | 16 | 8 | 8 |
| Pests of Corn, Wheat and Sugar Cane | 12 | 8 | 4 |
| Pests of Fruit Trees | 8 | 4 | 4 |
| Stored grain Pests & Wood borer | 8 | 4 | 4 |
| Pollinators &Honey bee | 10 | 6 | 4 |
| Silkworm | 10 | 6 | 4 |
| Predators & Parasites | 10 | 6 | 4 |
| Total | 82 | 50 | 32 |

4- Teaching and learning methods

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| 4.1. lectures |
| 4.2- laboratory lessons (practical examination to the biological samples) |
| 4.3. Assays and reporting in different topics |

5- Student assessment:

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| 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. Work sheets and essays | - To assess: General & transferable skills |
| 5.2. Assessment schedule | Assessment 1: Short exam Final written exam | - Along the term - Week: 14 |
| | Assessment 2: Oral exam | - Week: 8 |
| | Assessment 3: Final lab exam | - Week: 10 |
| | Assessment 4: Semester work | - Along the term |
| 5.3. weighting of assessments | Final written exam % | 50% |
| | Final lab exam % | 30% |
| | Semester work & short exam % | 14% |
| | Oral exam % | 6% |
| | Total % | 100% |

6-List of references

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| 6.1. Course Note (If available) | - Course notes prepared by the lecturer |
| 6.2. Text Book | Wilson C, Broersma DB and Provonsha.1977. Fundamental of economic entomology. Waveland Press, Inc. Honey bee keeping Silkworm |
| 6.3. Additional References | Robert F. Harwood and Maurice T. James 1979. Entomology in human and animal health . Macmillian publishing, 548 PP |
| 6.4. Periodical Journals,..... etc. | Journal of Economic Entomology. American Journal of Entomological Society. Egyptian Journal of Entomological Society. http://www.ent.iastate.edu/List/ http://www.amonline.net.au/insects/research/index.htm |

7- Facilities required for teaching and learning

1. Chemical glasses.
2. Insecticides and other chemicals.
3. Alive insect samples.
4. Computer and specific software.
5. Data show.

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 | A6 | b1 | B3 | c 1 | C2 | d1 | D1 |
| a2 | A11 | b2 | B4 | c2 | C8 | d2 | D2 |
| | | b 3 | B9 | | | d3 | D7 |

9- Curriculum map

| Contents | Weeks | Course ILOs | | | | Teaching & learning methods | Assessment methods | Evidence |
|---|-------|-------------|---------------|------|-----------------|---|---|----------|
| | | a | b | c | d | | | |
| Introduction to Pest Definitions | | a1, a2 | b1 | | | Lectures & | - Short & final written exams Oral exam | |
| - Damage caused by Insects | | a1, a2, | b1, b 2 | c2 | d 1 d2 d3 | Lectures & practical labs | - Short & final written exams - Oral exam Semester work+ practical exam | |
| - Cotton Pests | | a 1, a 2 | b 1, b 2, b 3 | ,c2, | d 1, d2 | Lectures & practical labs Discussion | - Short & final written exams - Oral exam Semester work | |
| - Pests of Corn, Wheat and Sugar Cane Pests of Fruit Trees | | a 1, a2, | b 1, b 2, b 3 | c 2 | d 1, d2 | Lectures & practical labs | Short & final written, practical exam | |
| Stored grain Pests & Wood borer | | a 1, a2 | b 1, b2 | c 2 | d 1, d2 | Lectures & practical labs Discussion | - Short & final written, practical exam, | |

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|---------------------------|--|-----------|-----------------|----------|-----------------|---|--|--|
| | | | | | | | Oral exam Semester work+ | |
| Pollinators &Honey bee | | a 1 a2 | b 1 b3 | C1 C2 | d 1 d2 | - Lectures & practical labs - Discussion | - practical exam, Oral exam - Semester work+ | |
| Silkworm | | a 1 | b 1 b2 | C1 | d 1 d2 d3 | - Lectures & practical labs | - Short &final written, practical exam | |
| Predators & Parasites | | a 1 a2 | b 1 b2 b3 | C2 | d 1 | - Lectures & practical labs | - Short &final written exams - Oral exam Semester work | |

Course coordinator:

Name : Prof. Dr. \ . Asmaa Zu-Elhemma

Head of Zoology Department:

Prof. Dr. Zinab Aid