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**Department of plant protection.**

**College of agriculture.**

**University of salahaddin**

**Subject: Practical Horticulture Insects.**

**Course Book – (Year 4)**

**Lecturer's name:Noor nadhir polus MSc**

 **Gona sirwan sharif MSc**

**Academic Year: 2020-2021**

**Course Book**

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| **1. Course name** | **Horticulture Insects**  |
| **2. Lecturer in charge** | **Noor nadhir polus****Gona Sirwan Sharif** |
| **3. Department/ College** | **Plant protection /Agriculture** |
| **4. Contact** | **e-mail:** **noorkunda@yahoo.com** **07504676885** **Gonasirwan@yahoo.com****Tel: (optional):07702155967** |
| **5. Time (in hours) per week**  | **Practical: 6**  |
| **6. Office hours** |  **Sunday (2) andTuesday (3)** |
| **7. Course code** |  |
| **8. Teacher's academic profile**  | (noor)Date of Birth: 8 october 1985Place of Birth: erbilNationality: IraqiMarital Status: MarriedSex: Female(Gona)Date of Birth: 17 January 1984Place of Birth: SulaymaniyahNationality: IraqiMarital Status: MarriedSex: Female**Education:**(NOOr) B.Sc., Agriculture Plant Protection, University of Salahaddin-Erbil, 2006-2007)\*M.Sc., Agriculture Science/Plant Protection, University of Salahaddin-Erbil, 2014(Gona)\*B.Sc., Agriculture Plant Protection, University of Salahaddin-Erbil, 2004-2005)\*M.Sc., Agriculture Science/Plant Protection, University of Salahaddin-Erbil, 29 November 2012**Work History:**1. College of Agriculture, Plant protection department/Unviersity of Salahaddin-Erbil 2015 to 2016

As an assistant lecturer, I have teaching: 1. mediacal and veterinary insects stage 42. horticulture insect stage 4 1. College of Agriculture, Plant protection department/Unviersity of Salahaddin-Erbil

 November 2012 until date.(Assistant Lecturer)As an assistant lecturer, I have teaching:1- I was assisting assistant lecturer in teaching Insect physiology for Third year students. From 2012 to 2013.2- I was assisting assistant lecturer in teaching Field crop insects for Fourth year students. From 2013 to 2014.3- I was assisting assistant lecturer in teaching insect storage for Forth year students. From 2014 to 2015.4- I was a member in examination committee 2nd trial (first & second semester on 2012-2013).5- I was a member in examination committee on 2013-2014 semester.6- I was a member in Quality Assurance committee in plant protection department from 2013 to 2014.1. College of Agriculture, Plant protection department/University of Salahaddin-Erbil

 October 2008-October 2009 Assistant Agricultural EngineerAs an assistant agricultural engineer in university of Salahaddin-Erbil, my duties are:1- Assisting assistant lecturer in teaching Biological control.2- Assisting assistant lecturer in teaching field crop disease.3- Assisting assistant lecturer in teaching Bee breeding.4- Assisting assistant lecturer in teaching Medical and veterinary insects.5- Assisting assistant lecturer in teaching Forest insects.6- Assisting assistant lecturer in teaching Insect physiology.7-I was a member of a welcoming new students committee (2008-2009) whom get in to Agriculture college.(C) College of Agriculture, Horticulture department/University of Sulaymania June2006- September 2008 Assistant Agricultural EngineerAs an assistant agricultural engineer in university of Sulaymania, I was assisting the lecturer assistant in teaching of:1-Insect morphology.2-Insect taxonomy. |
| **9. Keywords** | **Introduction, Horticulture Scientific name, type of metamorphosis, order, family, common name, damages caused by this insect.**  |
| **10. Course overview:** **-**Fruit and vegetable crops are under constant pressure from pests such as weeds, viruses, fungi, bacteria, insects and nematodes. If not controlled, many of these pests substantially lower yields. Successful agricultural production has depended on the use of pesticides for 100 years, and, yet, losses still occur due to certain pests that are poorly controlled. Some crops incur high costs for hiring laborers to hoe weeds because there are no effective herbicides. In addition, new pests routinely arrive for which effective controls have not yet been developed.Agricultural researchers continuously seek out new methods to control pests, including biological agents, new chemicals and plant resistance through classical breeding. Biotechnology also offers a solution in some situations where traditional methods are ineffective or costly. Numerous researchers around the world are investigating biotechnological solutions to pest problems of horticultural crops. In 2002, the National Center for Food and Agricultural Policy released a study of current and potential biotechnological approaches to pest management in a wide array of crops**The importance of studying the subject:** 1-The meaning of Pests and types of pests. 2-Learning the scientific classification of pest species. Damages caused by this insect.  |
| **11. Course objective:**1-The meaning of Pests and types of pests. 2-Learning the scientific classification of pest species**.** |
| **12. Student's obligation** There are many thing important in In academic year:- attendance and completion of all tests, exams, assignments, reports , essays…etc . |
| **13. Forms of teaching**Teaching methods are ,using data show ways ,power point, white board, giving hand note, video reports |
| 14. Assessment schemeMarks distribution of 15%

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| Test | Mark 15% |
| 1st Exam | 5 |
| 2st Exam | 5 |
| Quiz | 2 |
| Report | 3 |
| Total | 15 |

Final examination out of (60%)

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| --- | --- |
| Monthly exam | Mark 60% |
| Theoretical exam | 40 |
| Pratical exam | 20 |
| Total grade | 60 |

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| **15. Student learning outcome:**1- Important Horticulture products. 2- Important Pest of Horticulture. 3-damage.4-Detection of insect infestation in Orchard5- Sources of infestation with Horticulture insects.  |
| **16. Course Reading List and References‌:**

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| 1- | Kenneth, L.R., 1991. Identification of insects and related pests of horticultural plants: a pictorial guide. |
| 2- | Wright, S., Fleury, R., Mittenthal, R. and Prokopy, R., 2000. Small-plot trials of Surround and Actara for control of common insect pests of apples. Fruit Notes, 65, pp.22-27.. |
| 3- |  . Sherwani, A., Mukhtar, M. and Wani, A.A., 2016. Insect pests of apple and their management. Insect pest management of fruit crops. New Delhi: Biotech Books, pp.295-306. |
| 4- | \*Garden Insect Control From North Carolina State Universityhttp:// www.ces.ncsu.edu/depts/ent/notes/vegetables/Veg15.htm/ |
| 5- | web. Clemson. Edu/cuentres/cesheets/ornament/index.htm\*Fruit Insect Pests from University of Kentuckyhttp:// www.uky.edu/Agriculture/Entomology/entfacts/effruit.htm |
| 6- | \*Vegetable Insect Pests.Colorodo State University.http:// www.ag.ohio-state.edu/inohioline/lines/vcrop.html>vegetable Information. |

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| **17. The Topics:** | **Lecturer's name** |
|  **(1st) week Introduction****Detection of insect infestation in orchard,** **The important techniques used for insects infestation detection,**  **Types of Horticulture pest** **(2 nd ) week The Major insects** **The Fruit Tree Insects** **(3rd ) The Apple Insects** **4rd )** **citrus insect** **5th Pomegranate Insects****(6 )Fig Insects**  **(7th) Olive Trees Insects****(8th) grape vine insects** **(9th) Stone Fruits Trees Insect****(10th  ) Vegetable Crops Insects****11th ) nuts insects**  |  |
| **18. Practical Topics (If there is any)** |  |
| **The important techniques used for insects infestation detection(Practical)** | Lecturer's nameex: (3-4 hrs)ex: 14/10/2015 |
| **19. Examinations:*****1*. Questions samples** **Q1. Identify this specimen?****1-Scientific name** **2- type of metamorphosis****3-order****4-family****5-common name** **Q2l What are the damages caused by this insect?** **Q3.A- Write the description of adult stage of this specimen?****B- Write the scientific and common name of it?** **Q4.****What are the damages of --------------on ---------plants only?****Q5l Identify this specimen?*** **1- description of larval stage**
* **2-type of metamorphosis**

**Q5. A- Write the description of this specimen?****B- Write the order of it?** **Q 6. What are the types of --------------, give an example for each type?****2. True or false type of exams:****B-The important (primal) infestation insects (Orders) 1-Order: Coleoptera.****2-Order :Lepidoptera (True)****3. Multiple choices:****A-The accidental infestation insects (orders): such as…****A- 1-Order: Coleoptera. B- Lepidoptera c- Thysanura.** |
| **20. Extra notes:**With the best wishes to the development of Lab. In the. Department. |
| **21. Peer review** .‌‌  |