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**Department of Field crops**

**College of Agricultural Engineering Sciences**

**Salahaddin University**

**Subject: Technology of crops diseases control**

**Course Book – (Year 3)**

**Lecturer's name: Tavga Sulaiman Rashid, PhD**

**Academic Year: 2023/2024**

**Course Book**

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| **1. Course name** | **Technology of crops diseases control** |
| **2. Lecturer in charge** | **Assist Prof. Dr. Tavga Sulaiman Rashid** |
| **3. Department/ College** | **Field crops department/ Agricultural Engineering Sciences** |
| **4. Contact** | **e-mail:** **tavga.rashid@su.edu.krd****,**  **tavga2020@yahoo.com****Tel: 009647504524781** |
| **5. Time (in hours) per week**  | **Theory: 2** **Practical: 3**  |
| **6. Office hours** | **Availability of the lecturer to the student during the week** |
| **7. Course code** |  |
| **8. Teacher's academic profile**  | BCs (Bachelor of Science) from Faculty of Agriculture, plant protection department, at Salahaddin University, Erbil, Iraq in July 2004. After obtaining MSc (Master of Science) at the same college in January 2008 in Plant Pathology, cooperated as a lecture in Agriculture college, Salahaddin University for a period of 4 years. Received PhD from Faculty of Agriculture, plant protection department in University Putra Malaysia (UPM) May 2016. Published 26 journal articles, 2 patent, 2 gold medals, 1 silver medal, research projects, ‎seminar proceeding and workshops.‎ |
| **9. Keywords** | Field crop diseases, diagnoses of pathogens, management  |
| **10. Course overview:** This course will focus on details, the symptoms, the primary cause, conditions favouring development and dissemination of important crops, especially those grown in Uganda such as Cereals and Grasses; Legumes; and Fiber and Other Field Crops. |
| **11. Course objective:**To study the causal organism, symptomatology, etiology and epidemiology of the important diseases of field crops for devising efficient management strategies against them. |
| **12. Student's obligation**Students must complete Learning assessments based on lecture material and supplementary lecture-related material. Research and reading are required to complete these. There is a voluntary competition where students must write about bacteria and fungi that cause diseases on crops. |
| **13. Forms of teaching**The lecturer will use data show by preparing PowerPoint presentations in which outlines of each lecture will be shown however the details of the lecture will be narrated by the lecturer herself. In some cases, samples will be shown to students to have a close and real idea on the subject. |
| **14. Assessment scheme**Students are evaluated during the semester for the theory part by daily short quizzes which giving 3 marks out of 15. Two term exams 12 mark each out of 15. The practical part is given 35 marks in total.‌ |
| **15. Student learning outcome:**Skill Development: This course will help the students in accurate identification of the diseases under farmer field conditions and in suggesting efficient and cost-effective management strategies against them.Know and appreciate symptoms of major field crop diseases and life histories of causal organisms. Students will be able to recognize at least 100 diseases of major crops in Uganda.Understand the epidemiology and control of diseases of field cropsUnderstand the potential loss of yield or quality from various diseases of field cropsLearn the best strategies to control crop diseases  |
| **16. Course Reading List and References‌:**▪ Key references:* Rangaswami, G & Mahadevan, K.2001. Diseases of crop plants in India, Prentice Hall of India Pvt. Ltd., New Delhi
* Singh, R.S.2005. Plant Diseases. Oxford & IBH Publications, New Delhi
* Pathak, V.n.2001. Diseases of Fruit crops.Oxford & IBH Publications, New Delhi
* Singh, R.S.1999. Diseases of vegetable crops. Oxford & IBH Publications, New Delhi
* Chaube, H.S and V.S. Pundhir,2012. Crop Diseases & Their Management. PHI Pvt. Ltd., New Delhi
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| **17. The Topics:** |  |
| 1. **Introduction**

Introduction to field crop diseases and control technics | 1. hrs)
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| 1. **Wheat and barley diseases**
 | (2 hrs) |
| 1. **Maize diseases**
 | (2 hrs) |
| 1. **Rice disease**
 | (2 hrs) |
| 1. **Fabaceae diseases**
 | (2 hrs) |
| 1. 1st Exam
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| 1. **Control strategies of the crop diseases**

**Chemical control** | (2 hrs) |
| 1. **Control strategies of the crop diseases**

**Biological control** |  |
| 1. **Potatoes diseases**
 | (2 hrs) |
| 1. **Cotton Diseases**
 | (2 hrs) |
| 1. **Sugar beets, sugar cane, hay, pasture** and **Sorghum diseases**
 | (2 hrs) |
| 1. 2nd Exam
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| 1. **Diseases of   Mustard**
 | (2 hrs) |
| 1. **Diseases of   Gram and  Sunflower**
 | (2 hrs) |
| 1. **Review**
 | (2 hrs) |
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| **18. Practical Topics (If there is any)** | (3 hrs) |
| 1. Laboratory tools
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| 1. Identification and histopathological studies of selected diseases of field and horticultural crops covered in theory.
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| 1. Field visit for the diagnosis of field problems.
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| 1. Collection and preservation of plant diseased specimens for herbarium.
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| 1. Identification and histopathological studies of diseases of wheat and barley
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| **1st Exam** |  |
| 1. Identification and histopathological studies of diseases of rice
 |  |
| 1. Identification and histopathological studies of diseases of maize
 |  |
| 1. Identification and histopathological studies of diseases of Sugarcane.
 |  |
| 1. Identification and histopathological studies of diseases of Sunflower.
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| **2nd Exam** |  |
| 1. Identification and histopathological studies of diseases of Mustard.
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| 1. Field visit for the diagnosis of field problems.
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| **19. Examinations:*****1.* Definitions****2. What are the causal agents of the following diseases?****3. What are the differences between:****4. What are the symptoms of the following diseases**   |
| **20. Extra notes:**Here the lecturer shall write any note or comment that is not covered in this template and he/she wishes to enrich the course book with his/her valuable remarks. |
| **21. Peer review پێداچوونه‌وه‌ی هاوه‌ڵ** I approve that the course is comprehensive and cover all the aspects of the course.Name:Degree:Specialty:Sign:Date: |