

**Department of Plant Protection**

**College of Agriculture**

**University of Salahaddin**

**Subject: Seed-borne diseases**

**Course Book – (Year 3)**

**Lecturer's name: Qasim Marzani, PhD**

**Academic Year: 2022/2023**

# Course Book

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| **1. Course name** | **Seedborne diseases** | |
| **2. Lecturers in charge** | **Dr. Qasim Marzani**  **MSc. Muhammad Zrar and MSc. Majid Mustafa** | |
| **3. Department/ College** | **Plant Protection/ College of Agriculture** | |
| **4. Contact** | **Dr. Qasim: e-mail:** [**qasim.marzani@su.edu.krd**](mailto:qasim.marzani@su.edu.krd)  **Tel: 07504668898**  **MSc. Muhammad: email:** [**Muhammed.bakir@su.edu.krd**](mailto:Muhammed.bakir@su.edu.krd)  **Tel.: 07507889848** | |
| **5. Time (in hours) per week** | **Theory: 2**  **Practical: 3** | |
| **6. Office hours** | **Sunday to Thursday** | |
| **7. Course code** |  | |
| **8. Teacher's academic profile** | **Dr. Qasim:** Doctor of Philosophy in Plant Pathology, graduated in the University of Nottingham, England, United Kingdom, 2007 - 2011.  MSc. Muhammad Zirar, Master in plant pathology | |
| **9. Keywords** | **Seed pathology, seed-borne diseases.** | |
| **10. Course overview:**  This course considered a core part of plant pathology because many destructive diseases are transmitted through seeds. The students will be given a background about the role of seeds in plant pathology. In the theory part, students acknowledged with importance of the seeds in the life cycle of diseases, how the diseases detected and the pathogens diagnosed, and the management of these diseases will also covered in this course.  In the practical part, students will be acquainted with the methods of seed testing, the isolation of pathogens and diagnose the pathogens. The practical part will depend primarily on bringing suspected samples (seeds) in to the lab and testing them for their health. At the beginning of each week the students will be acknowledged with a procedures to apply it in the practical manner. | | |
| **12. Student's obligation**  Lectures are the most common method of teaching. It is most important for students to ensure that have a set of good clear notes based on the lectures andstudent’s own reading. Students have to attend every single lecture on time and have to be prepared for daily quizzes and follow the lecture. They are responsible for all explanations and details that will be given by the lecturer and he/she has to write down them in their notebooks. Referring to text books is also required in order to have more details about any subject. Based on time schedule, assignments related to the module, will also be given to the students. | | |
| **13. Forms of teaching**  Use of data show by preparing PowerPoint presentations in which the outlines of each lecture will be shown but the details of the lecture will be narrated by the lecturer himself. The white board is also required for many explanations and illustrations. In some cases, samples will be shown to students to have a close and real idea on the subject. The concentration will be on student-centred learning method instead of lecturer-cantered one. | | |
| **14. Assessment scheme**  Students are evaluated during the semester for the theory part by daily short exams (quizzes) with giving 5 marks out of 15. Two term exams, 10 marks each out of 15, will be required. The practical part is given 35 marks in total. ‌ Course works (assignments) are identified in each module description. Penalties are applied for late submission of coursework (5% per working day), unless there are explanatory circumstances and appropriate documentation is provided. | | |
| **16. Course Reading List and References‌:**  Recommended books will be identified at the start of teaching   * Key references:  1. Principles of seed pathology, by Vijendra K. Agarwal, 1987. 2. Seed Pathology, volume i , by paul neergaard, 1977. 3. Seed-Borne Diseases of Agricultural Crops: Detection, Diagnosis & Management, by Ravindra Kumar and Anuja Gupta, eds., 2020.  * Useful references:   1. Plant pathology,Agrios, 5th ed, 2005. | | |
| **17. The Topics:** | | **Lecturer's name** |
| 1. An Introduction-Terminology-History-importance- Economic Significance of Seed-borne Diseases - seed-borne pathogens- 2. Seed Structure and Development in Relation to Infection, Location of seed-borne Inoculum, 3. Mechanism of Seed Infection, Factors Affecting Seed Infection, Longevity of seed-borne Pathogens, Seed Transmission and Inoculation, 4. Factors affecting seed transmission of pathogens, 5. Detection and diagnosis of seed-borne pathogens 6. Exam 1 + Control of seed-borne diseases 7. Cereal seed-borne disease (wheat, barley, rice, etc.) 8. Corn seed-borne diseases 9. Legume seed-borne diseases 10. Vegetable seed-borne diseases 11. Fruits seed-borne diseases 12. Forest seed-borne diseases 13. Seed-borne diseases of oil-seed crops 14. Seed-borne diseases of fibre and forage crops 15. Exam 2 + Non-parasitic seed disorders | |  |
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| Dr. Qasim Marzani |
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| **18. Practical Topics (If there is any)** | |  |
| 1. Culture media used – agar tests 2. Detecting seed viability, germination and vigour tests 3. Detection of seed-borne pathogens-testing methods 4. Detection of cereal seed-borne disease (wheat, barley, rice, etc.) 5. Corn seed-borne diseases 6. Exam 1 7. Legume seed-borne diseases 8. Vegetable seed-borne diseases 9. Fruits seed-borne diseases 10. Forest seed-borne diseases 11. Seed-borne diseases of oil-seed crops 12. Seed-borne diseases of fibre and forage crops 13. Management of Seed-Borne Pathogens/Diseases 14. Exam 2 | | M. Muhammed Zrar |
| 1. **Examinations:** | | |
| 1. **Assessment scheme:**   **• Theory part:**  **o** First term exam: 5 marks  o Second term exam: 5 marks  o Short exams-quizzes: 3 marks  o Other activities: 2 marks  o Subtotal: 15 marks  **• Practical part:** | | |
| **20. Extra notes:**  When an exam deferred by a student, whatever be the reason, he/she has to do the exam within one week from deferral. **It is the student's responsibility** to contact the lecturer/instructor with the frame time to rearrange for an alternative exam. Failure to do so in a timely fashion may result in a zero grade for the missed exam. | | |
| **21. Peer review پێداچوونه‌وه‌ی هاوه‌ڵ**  I thereby approve that the course is comprehensive and cover all aspects of the course. The subjects are arranged sequentially that enable the students to learn gradually step by step.  Name:  Degree:  Speciality:  Signed:  Date: | | |