

Ministry of Higher Education and Scientific research



Kurdistan Regional Government  
Salahaddin University  
College of Agriculture Engineering Science  
Department of Plant protections  
Subject: Field Crop Diseases/year 4  
Lecturer's name: Dr Tahsein A. M. Amein  
Academic Year: 2022 - 2023

## Course Book

<b>1. Course name</b>	Field Crop Diseases
<b>2. Lecturer in charge</b>	Dr Tahsein A.M.Amein
<b>3. Department/ College</b>	Plant protection/ College of Agriculture Engineering Science
<b>4. Contact</b>	e-mail: tahsin.mohammad@su.edu.krd Tel: (optional) 0750 7422500
<b>Time (in hours) per week</b>	2
<b>6. Office hours</b>	Sunday (9 - 12) and Tuesday (9 - 12)
<b>7. Course code</b>	
<b>8. Teacher's academic profile</b>	<p><b>Education and Academic degrees:</b></p> <p>1988 – Ph D Plant Pathology, University of Agriculture, Poznan, Poland. 1984 – M Sc Plant Pathology, University of Agriculture, Poznan, Poland. 1981 – B Sc Plant Pathology, University of Agriculture, Alexandria, Egypt.</p> <p><b>Title of Ph D thesis:</b></p> <p>” Etiology and ecology of root and stem base diseases of wheat”</p> <p><b>M Sc project:</b></p> <p>Susceptibility of two seed- potatoes varieties on bacteria <i>Erwinia carotovora ssp atroseptica</i> infection and occurrence of other diseases.</p> <p><b>Employment / Working experiences:</b></p> <ul style="list-style-type: none"> <li>- Undergraduate teaching in Poland and in Sweden (Plant Pathology).</li> <li>- Responsible for postgraduate courses (Plant Pathology). (Sweden) - M Sc students in Sweden and Kurdistan. <ul style="list-style-type: none"> <li>- Projects leader and researcher.</li> <li>- International collaboration experience <ul style="list-style-type: none"> <li>➤ Working with a European Union (EU) project, were Universities from five EU – country members were involved in this project; Germany, Italy, Netherlands, England and Sweden besides of some seed companies.</li> <li>➤ Teacher exchange (collaboration programs).</li> </ul> </li> </ul> </li> <li>- October 2012 – Present. Salahaddin University, College of Agriculture, Plant Protection Department.</li> <li>- Sep. 2009 – Oct. 2012. Swedish University of Agricultural Sciences (SLU), Department of Plant Biology &amp; Forest Genetics.</li> <li>- July 2003 – Sep. 2006. Goteborg’s University. Department of Cell and Molecular Biology.</li> <li>- Feb. 2004 – Dec. 2005. The Mase laboratories (MASE – Microbial Activity for a Sound Environment).</li> <li>- Oct. 1991 – June 2003. Linked (with some exclusion for different periods) to Swedish University of Agricultural Sciences (SLU), Plant Pathology and Biocontrol Unit.</li> </ul>

	<ul style="list-style-type: none"> <li>- Sep.1997 - March 1998. Product development manager at Bio Agri AB. Research Company, Sweden.</li> <li>- June - July1990. Field assistant at Hushållningssällskapet. (Farmer's local organization). Borås. Sweden.</li> <li>- Oct. 1984 – June 1988. University of Agriculture, Poznan, Poland.</li> </ul>										
<b>9. Keywords</b>	Field crop diseases, cereal diseases, rusts, smuts, powdery mildew, fusarium, rice, corn diseases, pea diseases, diseases symptoms and sings.										
<p><b>10. Course overview:</b></p> <p>Field crops are a daily food and the key source of nutrition for millions of poor people's around the world. Heavily annual losses are caused by plant pathogens that attack these crops wherever they are grown. Control programs request studying these pathogens and depending upon symptoms appearance and microscopic features, disease cycles and their developments, the disease diagnoses of the causals are possible.</p>											
<p><b>11. Course objective:</b></p> <p>Recognition of the disease, and understanding of the pathogen(s) responsible, is the first step in successful disease control. As a result of this course, the student will learn the importance of field crop diseases. Get knowledge about many worldwide important diseases, particularly the most common cereal crops grown under local conditions. Description of the disease, including the causal agent, symptoms, environmental conditions favorable for the disease development and provide a good control working knowledge.</p>											
<p><b>12. Student's obligation:</b></p> <p>Should be prepared for 10 min quizze in the begging of each lecture for the previous lecture's content. Collect diseased plants samples and identify in the lab. Write a report about a plant disease.</p>											
<p><b>13. Forms of teaching</b></p> <p>Teaching methods are, using data show, power point, white board, giving hand note, video reports.</p>											
<p><b>14. Assessment scheme</b></p> <p><b>Grade distribution of 15</b></p> <table border="1" data-bbox="100 1346 1373 1535"> <thead> <tr> <th>Test</th> <th>Mark 15</th> </tr> </thead> <tbody> <tr> <td>Exam</td> <td>10</td> </tr> <tr> <td>Quiz</td> <td>2</td> </tr> <tr> <td>Report</td> <td>3</td> </tr> <tr> <td>Total</td> <td>15</td> </tr> </tbody> </table>		Test	Mark 15	Exam	10	Quiz	2	Report	3	Total	15
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<p><b>Final examination out of (50%)</b></p> <table border="1" data-bbox="100 1604 1373 1682"> <thead> <tr> <th>Monthly exam</th> <th>Mark%</th> </tr> </thead> <tbody> <tr> <td>Theoretical exam</td> <td>50</td> </tr> </tbody> </table>		Monthly exam	Mark%	Theoretical exam	50						
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<p><b>15. Student learning outcome:</b></p> <p>As a result of this course, the student will learn the importance of field crop diseases. Get knowledge about many worldwide important diseases, particularly the most common cereal crops grown under local conditions. Description of the disease, including the causal agent, symptoms, environmental conditions favorable for the disease development and provide a good control working knowledge.</p>											

<b>16. Course Reading List and References:</b>																						
<b>Main reference</b>	<b>Useful references</b>	<b>Magazines and review (Internet)</b>																				
<ol style="list-style-type: none"> <li>1. Agrios , G.N. (2005) . Plant Pathology . 5th ed . Academic press . p.952</li> <li>2. Fungi and Fungus – like Organisms The American Phytopathology Society. 2010 (internet)</li> <li>3. Handbook of Pea Diseases. D.J Hagedorn, 1991(internet)</li> <li>4. Wheat rusts. AN ATLAS OF RESISTANCE GENES. ©CSIRO Australia 1995.</li> <li>5. Rice disease identification. Department of Plant Pathology and Crop Physiology, Baton Rouge LA. (internet)</li> </ol>		Plant Pathology Articles and reviews																				
<b>17. The Topics:</b>		<b>Lecturer's name</b>																				
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- Powdery mildew	4 – 5
- Fusarium complex	
- Spot blotch (Foot Rot)	
- Septoria	
- Net blotch	
- Wheat streak mosaic virus (WSMV)	
- Barley yellow dwarf virus (BYDV)	
- Root Lesion Nematodes	
- <b>Exam</b>	<b>6</b>
<i>Rice diseases</i>	7
• Rice blast	
• Seedling blight (different fungi)	
• Brown spot	
• Sheath blight	
<i>Corn diseases</i>	8 - 9
• Common smut	
• Head smut	
• Southern corn leaf blight	
• Common corn rust	
• Fusarium kernel or ear rot	
• Stewart’s bacterial disease	
- <i>Cotton diseases</i>	10 - 11
• Verticillium wilt	
• Root rot	
• Fusarium wilt	
• Pythium damping off	
• Bacterial blight	
- <i>Pea diseases</i>	12 -13
• Bacterial blight	
• Ascochyta	
• Powdery mildew	
• Damping off	
• Stem and root rot	
• Fusarium wilt	

<ul style="list-style-type: none"> <li>• Seedborne mosaic virus</li> <li style="padding-left: 40px;">- <i>Soybean diseases</i> <span style="float: right;">14 – 15</span></li> <li>• Phytophthora root and stem rot</li> <li>• Rhizoctonia root rot</li> <li>• Septoria brown spot</li> <li>• Downy mildew</li> <li>• Powdery mildew</li> <li>• Cyst nematode</li> <li>• Bacterial blight</li> <li>• Soybean Mosaic Virus</li> </ul> <p><b>18. Practical Topics (If there is any)</b></p>	
<p><b>Plant Disease Collection:</b> Visiting different fields and collecting diseased plant samples to identify in the lap. (Practical lect.).</p>	
<p><b>19. Examinations:</b></p> <ol style="list-style-type: none"> <li>1- Define the following?</li> <li>2- Describe the live cycle of .....</li> <li>3- What is the differences between?</li> <li>4- How important this disease?</li> <li>5- Write the scientific name of?</li> <li>6- Which environment condition favour this disease?</li> </ol>	
<p><b>20. Extra notes:</b></p> <p>- <b>Quizzes:</b> All quizzes require integration of the materials presented in lectures and in laboratories. 10 min. quizzes at the beginning of each lect.</p>	
<p><b>21. Peer review</b> <span style="float: right;"><b>پیداچوونہوہی ھاوہل</b></span></p> <p>This course book has to be reviewed and signed by a peer. The peer approves the contents of your course book by writing few sentences in this section.  <i>(A peer is person who has enough knowledge about the subject you are teaching, he/she has to be a professor, assistant professor, a lecturer or an expert in the field of your subject).</i></p> <p>ئہم کورسبوو کہ دەبیت لەلایەن ھاوہلئیکى ئەکادیمیەوہ سەیر بکرتیت و ناوەرۆکی بابەتەکانى کورسەکە پەسەند بکات و جەند وشەیک بنووسیت لەسەر شیاوی ناوەرۆکی کورسەکە و واژووی لەسەر بکات.          ھاوہل ئەو کەسەیکە کە زانیاری ھەبیت لەسەر کورسەکە و دەبیت پلەى زانستى لە ماموستا کەمتر نەبیت.</p>	



Kurdistan Regional Government  
Salahaddin University  
College of Agriculture Engineering Science  
Department of Plant protections  
Subject: Field Crop Diseases/year 4  
Lecturer's name: Nask Sherzad Salh  
Academic Year: 2022 /23

## Course Book

<b>1. Course name</b>	Field Crop Diseases
<b>2. Lecturer in charge</b>	Nask Sherzad Salh
<b>3. Department/ College</b>	Plant protection/ College of Agriculture Engineering Science
<b>4. Contact</b>	<b>e-mail:</b> <a href="mailto:nask.salh@su.edu.krd">nask.salh@su.edu.krd</a> . <b>Tel:</b> 009647507176155
<b>Time (in hours) per week</b>	3
<b>6. Office hours</b>	<b>(8:30-11:30) (11:30-2:30)</b>
<b>7. Course code</b>	
<b>8. Teacher's academic profile</b>	<p><b>Education and Academic degrees:</b></p> <p>Born on:30 June 1986 Baghdad/ Iraq *B.Sc. Agriculture Plant Protection, University of Salahaddin-Erbil, 2008-2009)</p> <p>*M.Sc. Plant Pathology/Plant Protection, University of Salahaddin-Erbil, 2015</p> <p>Work History:</p> <p>In plant protection.3rd of the 10th BSc degree , started working as an academic staff (teaching assistant),getting MSc. Degree In plant pathology in 2015 and working as an assistant lecture in department until now.</p> <p>As an Assistant Lecturer, I was teaching:</p> <ol style="list-style-type: none"> <li>1. Principles of plant pathology for 1st stage students. 2016-2017</li> <li>2. Postharvest Diseases for 3rd stage students. 2016-2017</li> <li>3. Microbiology for 2nd stage students. 2019-2020</li> <li>4. Field crop diseases for 4th stage 2019-2020 Field crop dis. For 4<sup>th</sup> stage 2021-2022</li> </ol> <p>All in plant pathology department</p>
<b>9. Keywords</b>	Field crop diseases, cereal diseases, rust, smuts, powdery mildew, fusarium, rice, corn diseases, pea diseases, diseases symptoms and, sings
<b>10. Course overview:</b>	Students will learn about Field crop diseases heavily annual losses are caused by plant pathogens that attack these crops wherever they are grown studying these pathogens and depending upon symptoms appearance and microscopic features, disease cycles and their developments, the disease diagnoses of the causals are possible.
<b>11. Course objective:</b>	Recognition of the disease, and understanding of the pathogen(s) responsible, is the first step in successful disease control. As a result of this course, the student will learn the importance of field crop diseases.



Get knowledge about many worldwide important diseases, particularly the most common cereal crops grown under local conditions. Description of the disease, including the causal agent, symptoms, environmental conditions favorable for the disease development and provide a good control working knowledge.

**12. Student's obligation:**

Should be prepared for 10 min quiz in the beginning of each lecture for the previous lecture's content. Collect diseased plants samples and identify in the lab. Write a report about a plant disease.

**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. Work in laboratory.

**14. Assessment scheme**

**Grade distribution of 35**

Test	Mark 15
Exam (1& 2)	20
Quiz	10
Report	5
Total	35

**15. Student learning outcome:**

As a result of this course, the student will learn the importance of field crop diseases. Get knowledge about many worldwide important diseases, particularly the most common cereal crops grown under local conditions. Description of the disease, including the causal agent, symptoms, environmental conditions favorable for the disease development and provide a good control working knowledge.

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<p>- <i>Cotton diseases</i> 11 - 12</p> <ul style="list-style-type: none"> <li>• Verticillium wilt</li> <li>• Root rot</li> <li>• Fusarium wilt</li> <li>• Pythium damping off</li> <li>• Bacterial blight</li> </ul>	
<p>- <i>Pea diseases</i> 13 - 14</p> <ul style="list-style-type: none"> <li>• Bacterial blight</li> <li>• Ascochyta</li> <li>• Powdery mildew</li> <li>• Damping off</li> <li>• Stem and root rot</li> <li>• Fusarium wilt</li> <li>• Seedborne mosaic virus</li> </ul>	
<p><b>18. Practical Topics (If there is any)</b></p>	
<p><b>Plant Disease Collection:</b> Visiting different fields and collecting diseased plant samples to identify in the lab. (Practical lect.).</p>	
<p><b>19. Examinations:</b></p> <ol style="list-style-type: none"> <li>1. Definitions</li> <li>2. Write the scientific name of?</li> <li>3. What are the differences between:</li> </ol>	
<p><b>20. Extra notes:</b></p> <p>- <b>Quizzes:</b> All quizzes require integration of the materials presented in laboratories. 10 min. quizze at the beginning of each lect.</p>	

## 21. Peer review

## پیداچونہوہی ھاوہل

This course book has to be reviewed and signed by a peer. The peer approves the contents of your course book by writing few sentences in this section.

*(A peer is person who has enough knowledge about the subject you are teaching, he/she has to be a professor, assistant professor, a lecturer or an expert in the field of your subject).*

ئەم كۆرسىبووكە دەبىت لەلايەن ھاوھلىكى ئەكادېمىيە سەپىر بىكرىت و ناوھرۆكى بابەتەكانى كۆرسەكە پەسەند بىكات و جەند ووشەيەك بنوسىت لەسەر شىاوى ناوھرۆكى كۆرسەكە و واژووى لەسەر بىكات.

ھاوھل ئەو كەسەيە كە زانىارى ھەبىت لەسەر كۆرسەكە و دەبىت پلەي زانستى لە مامۇستا كەمتر نەبىت.