



TEACHING PLAN: Diseases of Field & Horticultural Crops & their Management-II

SCHOOL: (SOAS) SCHOOL OF Agricultural Science		ACADEMIC SESSION: 2023 – 2024		FOR STUDENTS' BATCH:2021-2025		
1	Course Code.	APP-301/APP-P-301				
2	Course Title	Diseases of Field & Horticultural Crops & their Management-II				
3	Credits	3 (_2+1)				
4	Learning Hours		Contact Hours	24		
			Assessment			
			Guided Study			
			Total hours	100		
5	Course Objective	<div>1. To study living, non-living and environmental causes of diseases or disorders of the plants.</div> <div>2. To study the mechanism of plant disease development.</div> <div>3. To study interaction between host/susceptible and the pathogens.</div> <div>4. To develop systems of management of plant diseases and reducing losses caused by them.</div> <div>5. To study on enhance of ability through proper monitoring of field for the detection and diagnosis of plant diseases</div> <div>6. To study theidentification of causal organism and management of plant disease.</div> <div>7. Provide an overview of the basic principles of plant disease Management.</div>				
6	Course Outcomes	<div>1. Employ a broad understanding of tax law</div> <div>2. Conduct tax law research by using research skills to interrogate primary and secondary legal materials, and analyse and synthesize complex legal information.</div> <div>3. Apply principles of tax law to complex legal problems, and critique the tax law from theoretical and practical perspectives individually and in collaboration with others.</div> <div>4. Structure and sustain concise and cohesive arguments with respect to selected issues in tax law in written and spoken formats.</div> <div>5. Work in teams and interact with peers in an ethical, professional and safe manner.</div> <div>6. Incorporate social, policy, comparative, international and/or interdisciplinary approaches into analysis of tax law</div>				
7	Outline syllabus:					
7.01	Paper Code	Units	Syllabus	Page Number s ¹	Lectures	
7.02	APP-301/AP P-P-301	Unit -I Field Crops:	Introduction: Symptoms, etiology, disease cycle and management of following diseases: Rust, loose smut, karnal bunt, powdery mildew, alternaria blight, and ear cockle;			
		Wheat				
		Sugarcane	Red rot, smut, wilt, grassy shoot, ratoon stunting and PokkahBoeng;			
		Sunflower	Sclerotinia stem rot and Alternaria blight;			
		Mustard	Alternaria blight, white rust, downy mildew and Sclerotinia stem rot;			

		Gram	wilt, grey mould and Ascochyta blight; Lentil: rust			
		Cotton	Anthrachnose, vascular wilt, and black arm			
		Pea	Downy mildew, powdery mildew and rust.			
7.03						
		Unit -II Horticultural Crops:	Introduction: Symptoms, etiology, disease cycle and management of following diseases:			
		Mango	Anthrachnose, malformation, bacterial blight and powdery mildew.			
		Citrus	Canker and gummosis.			
		Grape vine	Downy mildew, Powdery mildew and anthracnose.			
		Peach	leaf curl			
		Apple	Scab, powdery mildew, fire blight and crown gall.			
		7.04	Unit -III (Practical)	Topic to be taught		
				Identification and histopathological studies of selected diseases of field and horticultural crops covered in theory		
		Field visit for the diagnosis of field problems				
		Collection and preservation of plant diseased specimens for herbarium.				
		Note: Students should submit 50 pressed and well-mounted specimens.				
8	Course Evaluation					
8.1	CA: 30%					
8.11	Attendance					
8.12	Homework	4 Assignments, 10%				
8.13	Quizzes	4 Quizzes, 80%				
8.14	Projects	1 Project, 5%				
8.15	Presentation	1 Presentation, 5%				
8.16	Any other	--				
8.2	MTE	20%				
8.3	End-term examination: 50%					
9	Text Books & References					
9.1	Text book	1. Diseases of crop plants in India. G. Rangaswami and A. Mahadevan., PHI Learning Private limited, Delhi-110092-2018. 2. Diseases of field and horticultural crops and their management-I., Dr. Manoj Kumar kalita, kalyani Publishers. 3. Diseases of vegetables., R. S. Singh.,Oxford & IBH Publishing Co Pvt.Ltd				

		<p>4. Diseases of fruits. R. S. Singh.,Oxford & IBH Publishing Co Pvt.Ltd.</p> <p>5. References 1. Diseases of Fruit Crops – Pathak V.N. 1980 Oxford & IBH Publishing Co. Pvt. Ltd.</p> <p>6. Diseases of Tropical and Subtropical Field, Fiber and oil plants – Cook AA 1981 Mac Millan Publishing Co. New York.</p> <p>7. Diseases of Crop Plants in India – Rangaswamy G 1988 Prentice Hall of India Pvt. Ltd. New Delhi.</p> <p>8. Diseases of Ornamental Plants in India – Sohi H S 1992 ICAR, New Delhi.</p> <p>9. Diseases of Vegetable crops – Singh R S 1994 Oxford & IBM Publishing Co. Pvt. Ltd. New Delhi.</p> <p>10. Plant Diseases – Singh R S 1996 Oxford & IBM Publishing Co. Pvt. Ltd. New Delhi</p>
9.2	Journal and magazine References	<p>1. Phytopathology,</p> <p>2. Physiological and Molecular Plant Pathology</p> <p>3. Plant Pathology</p> <p>4. Plant Pathology Journal</p> <p>5. Tropical Plant Pathology</p> <p>6. Indian farming</p> <p>7. Times of Agriculture</p> <p>8. Indian farmer digest</p> <p>9. Gyan Ganga</p>
9.3	Video References	<p>https://www.youtube.com/watch?v=6bBFhiyatdM</p> <p>https://www.youtube.com/watch?v=dDdNFYisIZg</p> <p>https://www.youtube.com/watch?v=gRU4WZvIRrM</p> <p>https://www.youtube.com/watch?v=V4ezE2ZQQso</p> <p>https://www.youtube.com/watch?v=yv6oavt5s-E</p> <p>https://www.youtube.com/watch?v=GvO2BIuOdmg</p> <p>https://www.youtube.com/watch?v=dj051d21K1M</p> <p>https://www.youtube.com/watch?v=IMvWsly-Pg8</p> <p>https://www.youtube.com/watch?v=gkTQtZoEGU0</p> <p>https://www.youtube.com/watch?v=gnlzMIrjsrQ</p>
9.4	For Video lectures	Subscribe the channel. Dr. Agriculturist (https://bit.ly/3d5Cf6A)

Mapping of Outcomes v. Topics

Outcome no. → Syllabus topic↓	1	2	3	4	5
Paper Code.Unit I (a)	✓				
Paper Code. Unit I (b)		✓			
Paper Code. Unit I (c)			✓		
Paper Code.Unit II (a)				✓	
Paper Code. Unit II(b)				✓	
Paper Code. Unit II(c)				✓	
Paper Code.Unit III (a)				✓	
Paper Code. Unit III(b)				✓	
Paper Code. Unit III(c)				✓	

Paper Code. Unit IV (a)				✓	
Paper Code. Unit IV(b)				✓	
Paper Code. Unit IV(c)				✓	
Paper Code. Unit V (a)				✓	
Paper Code. Unit V(b)				✓	
Paper Code. Unit V(c)					✓

QUESTION BANK

A. Fill in the blanks

- The causal organism of yellow rust of wheat is
- i. causes red rot of sugarcane iii. White rust of mustard is caused by
-causes karnal bunt of wheat.
- The causal organism of rust of pea is
- Anthrachnose of mango producesas asexual fruiting body
- causes white mold of sunflower
- Stag head inflorescence is formed in disease
- Wilt of gram is caused by
-causes rust of lentil.
- is the causal organism of black rust of wheat.
-is the causal organism of downymildew of cucurbites.
-is the causal organism of powdery mildew of cucurbites.
- . Dieback of rose caused due to.....
- Botrytis blight of marigold caused due to.....

B. Write short notes on

- Grey mould of gram
- Ear cockle of wheat
- Why sclerotinia stem rot is known as white mold

4. Alternaria leaf spot of mustard
 5. Smut of sugarcane
 6. Peach leaf curl
 7. Stem gall of coriander
 8. Botrytis blight of marigold
 9. Die back of rose
 10. Strawberry leaf spot
 11. Symptoms of powdery mildew disease
 12. Management of wilt disease
 13. Symptoms of anthracnose in chili crop
 14. Symptoms of red rot in sugarcane crop
 15. Chemical control measures
 16. Cultural practices
 17. Differentiate b/w Early & late blight
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3. Long Answer

1. Write down about the symptoms, etiology and disease management of rust of wheat.
2. Write about ascochyta blight of gram
3. Write the symptoms, etiology, epidemiology and management of ratoon stunting of sugarcane
4. Write down about the symptoms, etiology, and disease cycle and disease management of loose smut of wheat.
5. Write down about the symptoms, etiology, and disease cycle and disease management of Chilli Anthracnose
6. Write down about the symptoms, etiology, and disease cycle and disease management of Apple scab
7. Write the symptoms, etiology, epidemiology and management of Mango bacterial blight
8. Write the symptoms, etiology, epidemiology, disease cycle and management of late blight of potato

9. Write the symptoms, etiology, epidemiology, disease cycle and management of Angular leaf

spot/ Black arm of cotton

10. Write the symptoms, etiology, epidemiology, disease cycle and management of White rust of

mustard

Projects/ Assignment (To be given to group of students)

1. **Note:** Each group of Students should submit 50 pressed and well-mounted specimens.