

**Rajarshi Shahu Mahavidyalaya, Latur**  
**(Autonomous)**

**Structured Work Plan for Teaching**  
**(2021 to 2022)**

Details of Classes to be taught

Sr. No.	Class	Name of Asst. Prof.	Subject	Paper
1	B.Sc.III	Prof.S.N.Shinde	Botany	Theory Paper-XII Plant pathology –II (DSE)

Summary of Lesson Plan

Name of Teacher: Prof.S.N.Shinde


Class: B.Sc.III (VI Semester)

Sr. No.	Subject	Unit and Chapter to be covered	Date	No. of Lectures	Academic activities to be organized	No. of Test / Assignment with topic and date
1	UNIT-I: AEROBIOLOGY AND SEED PATHOLOGY (10 L)	1. Aerobiology- Definition, scope and importance 2. Disease forecasting. 3. Seed pathology-Definition, i. Seed borne pathogens (external and internal). ii. Detection of seed borne pathogens by blotter-paper and agar plate methods. iii. Seed treatment (hot water, solar, chemi iv. Seed certification.	17-12-21 to 14-01-22	02 02 02 02 02	Collection of diseased material	Activity based unit test I
2	UNIT-II: PLANT DISEASES-I (12 L)	Symptoms, causal organisms, disease cycle and control measures of 1.Tikka disease of groundnut, 2.White rust of Mustard, 3.Loose smut of Wheat, 4.Rust of Jowar, 5.Grain smut of Jowar, 6.Leaf curl of tomato.	15-01-22 to 12-02-22	03 02 02 02 02 01	Guest lecture	Preparation of Herbaria

3	UNIT-III: PLANT DISEASES-II (13L)	Symptoms, causal organisms, disease cycle and control measures of 1. Downy mildew of Grape, 2. Stem rust of Wheat, 3. Wilt of Tur, 4. Late blight of Potato, 5. Powdery mildew of pea 6. Papaya mosaic Root Knot of vegetables	17-02-22 to 12-03-22	02 03 02  02 02 02	Students seminars	Field visit
4	UNIT -IV: DEFENCE MECHANISM AND PLANT DISEASE MANAGEMENT (10 L)	1. Structural defense (pre existing and post infectious) 2. Biochemical defense- pre existing and postinfectious (phytoalexins) 3. Exclusion and eradication, 4. Chemical control-General account of Sulphur, Copper, systemic fungicides and antibiotics, 5. Integrated pest management 6. Biological control	17-03-22 to 15-04-22	02  02 02  02 02	Visit to nursery	Activity based unit test II

Teacher

  
**Head**  
**Department of Botany**  
**UG, PG and Research Centre**  
**Rajarshi Shahu Mahavidyalaya (Autonomous),**  
**LATUR-413 512**

  
**Principal**  
**Rajarshi Shahu Mahavidyalaya**  
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**(2021 to 2022)**

Details of Classes to be taught

Sr. No.	Class	Name of Asst. Prof.	Subject	Paper
1	M.Sc.II	Prof.S.N.Shinde	Botany	BO4.3 Plant pathology –II (DSE)

Summary of Lesson Plan

Name of Teacher: Prof.S.N.Shinde

Class: B.Sc.III (VI Semester)

Sr. No.	Subject	Unit and Chapter to be covered	Date	No. of Lectures	Academic activities to be organized	No. of Test / Assignment with topic and date
1	Credit-I: Introduction to Plant Pathology ( 15L )	1. History: Beginning of modern plant pathology; Contribution of Anton De Bray; Benedict Prevost; J.C. Kuhn; Paul Neergaard, P.H. Gregory. History of the development of plant pathology in India; plant disease clinics. 2. Disease inciting agents: i ) Biotic agents: Bacteria, viruses, fungi, Mycoplasma, nematodes. ii) Abiotic agents: Air pollution; mineral elements, temperature, toxic effects of improperly used chemicals. 3. Symptoms of plant diseases: Symptoms caused by Fungi, Bacteria, Viruses, Mycoplasma and Nematodes. 4 Dissemination of plant	17-12-21 to 14-01-22	02 02 02 02 02 02	Visit to research centre	

		<p>pathogen:Dissemination by Air,Water,Buds, Insects, Man andtransmission of plant viruses.</p> <p>5 Economic importance of plant diseases.</p>				
02	Credit-II: Diseases of crop plants: I(15L)	<p>Symptomology, causal organism, etiology and control measures of:-</p> <p>1)Wheat: Stem rust.</p> <p>2) Jowar: Head smut.</p> <p>4) Arhar: Wilt.</p> <p>5)Potato: Leaf spot (Cercospora).</p> <p>6) Groundnut:Tikka.</p> <p>7) Gram: Blight Disease.</p> <p>8)Tomato: Broom rape (Orobanche).</p> <p>9) Radish :Mosaic.</p> <p>10) Citrus: Canker</p>	<p>15-01-22 to 12-02-22</p>	<p>04</p> <p>02</p> <p>02</p> <p>02</p> <p>02</p>	Students seminars	Activity based unit test I
03	Credit-III: Diseases of crop plants II (15L)	<p>Symptomology, causal organism, etiology and control measures of</p> <p>1) Mango: Anthracnose.</p> <p>2) Pea: Rust.</p> <p>3) Sugarcane: Wilt.</p> <p>4) Sugarcane :Whip Smut</p> <p>5) Chilly: Leaf curl.</p> <p>6) Mustard: White Rust</p> <p>7) Crucifers: Black rot.</p> <p>8) Cucurbits: Fruit rot.</p> <p>9) Sugarcane: Gummosis.</p> <p>10) Giant mistletoes (Loranthus) – Mango</p>	<p>17-02-22 to 12-03-22</p>	<p>02</p> <p>01</p> <p>02</p> <p>02</p> <p>02</p> <p>02</p> <p>01</p> <p>01</p>	Guest lecture	Activity based unit test II
	Credit-IV: Epidemiology and forecasting of plant	<p>1. Epidemiology and forms of epidemics:</p> <p>i) Compound interest diseases, simple interest, diseases slow and rapid</p>	<p>17-03-22 to</p>			

04	diseases (15L)	<p>epiphytotics.</p> <p>ii) Essential conditions of epidemics, decline of epidemics.</p> <p>iii) Disease measurement, disease severity, analysis of epidemics.</p> <p>2. Disease assessment and forecasting.</p> <p>3. Pathogenesis: Penetration and entry by plant pathogen; Pre-penetration; Entry through natural opening; Direct penetration; Entry through wounds, root hairs and buds.</p> <p>4. Survivals of plant pathogen.</p> <p>5. Effects of infection on the host:</p> <p>i) Tissue disintegration.</p> <p>ii) Effect on growth of host.</p> <p>iii) Effect on reproduction</p> <p>iv) Effect on uptake and translocation of water and nutrients</p> <p>v) Effect on respiration of host.</p>	15-04-22	<p>05</p> <p>02</p> <p>03</p> <p>02</p> <p>03</p>	Preparation of Herbaria	
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Teacher

  
**Head**  
**Department of Botany**  
**UG, PG and Research Centre**  
**Rajarshi Shahu Mahavidyalaya (Autonomous),**  
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**PRINCIPAL**  
**Rajarshi Shahu Mahavidyalaya**  
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