



ANDHRA PRADESH STATE COUNCIL OF HIGHER EDUCATION

Syllabus for **B.VOC HORTICULTURE (MAJOR)** in consonance with Curriculum framework

(W.E.F. AY-2026-27)

COURSE STRUCTURE (for Semester IV)

Year	Semester	Course	Title	No of Hrs/week	No of Credits
II	IV	8	Basics of Vegetable Science – (T)	3	3
			Basics of Vegetable Science – (P)	2	1
		9	Plant Tissue Culture – (T)	3	3
			Plant Tissue Culture – (P)	2	1
		10	Management of Diseases in Horticultural Crops – (T)	3	3
			Management of Diseases in Horticultural Crops – (P)	2	1


P. RAVINDRANATH REDDY
LECTURER IN HORTICULTURE
S.V.C.R Govt. Degree College
Patamaner-517408, Chittoor (Dt)

SEMESTER-IV

COURSE – 10: MANAGEMENT OF DISEASES IN HORTICULTURAL CROPS

Theory

Credits – 3

3 hrs/week

I. Learning Objectives

- Understand the major diseases of fruit, vegetable, plantation, and ornamental crops and identify their symptoms and causal organisms.
- Explain the principles of plant disease management, including cultural, biological, chemical, and integrated methods.
- Analyze the epidemiology of plant diseases and the environmental factors influencing disease development in horticultural crops.
- Select and apply appropriate disease control strategies, including fungicides, biocontrol agents, resistant varieties, and eco-friendly practices.

II. Learning outcomes:

1. The students should understand the importance of the course as it deals with crop management and yields of the crop
2. The nature of damage, extent of damage, ETLs remedial measures for crop protection
3. The students should identify the casual organism by seeing the symptoms and nature of damage.
4. The student should know the spraying and spraying equipment and precautions to be taken while
5. Quick diagnosis, Quick decision, and correct action are very important Lecture outlines

III. Syllabus of Theory:

Unit - 1

1. Citrus diseases - Citrus canker, gummosis
2. Guava diseases: wilt and anthracnose.
3. Papaya diseases: leaf curl and mosaic and powdery mildew.
4. Sapota diseases: Flat limb.

Unit - 2

1. Grapevine diseases -downy mildew, Powdery mildew, anthracnose.
2. Apple diseases -Apple: scab, powdery mildew, fire blight
3. Peach diseases: leaf curl.

Unit - 3

1. Chilies diseases- Damping off, powdery mildew, Cercospora Leaf spot,
2. Brinjal diseases - Fruit rot, bacterial wilt
3. Okra diseases - powdery mildew and Yellow Vein Mosaic.
4. Tomato diseases - damping off, early blight, leaf curl,

Unit - 4

1. Crucifers and Cucurbits diseases
 - A. Cruciferous vegetables- white rust, Downy mildew, powdery mildew,
 - B. Cucurbits: downy mildew, powdery mildew,
2. Beans, Coriander diseases
 - A. Beans-Rust, Bean common mosaic virus
 - B. Coriander-stem gall.


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Pulimmetla-517408, Chittoor(Dt)

Unit - 5

1. Coconut diseases - Stem bleeding, wilt,
2. Oil palm diseases - Bunch rot and spear rot.
3. Turmeric diseases - leaf spot,
4. Ginger diseases- rhizome rot
5. Rose diseases- Dieback.
6. Chrysanthemum diseases-wilt

IV. Reference books:

1. Diseases of Fruit Crops – Pathak V.N. 1980 Oxford & IBH Publishing Co. Pvt. Ltd.
2. Diseases of Tropical and Subtropical Field, Fiber and oil plants – Cook AA 1981 Mac Millan Publishing Co. New York.
3. Diseases of Crop Plants in India – Rangaswamy G 1988 Prentice Hall of India Pvt. Ltd. New Delhi.
4. Diseases of Ornamental Plants in India – Sohi H S 1992 ICAR, New Delhi.
5. Diseases of Vegetable crops – Singh R S 1994 Oxford & IBM Publishing Co. Pvt. Ltd. New Delhi.
6. Plant Diseases – Singh R S 1996 Oxford & IBM Publishing Co. Pvt. Ltd. New Delhi.


P. RAVINDRANATH REDDY
LECTURER IN HORTICULTURE
S.V.C.R Govt. Degree College
Palamaner-517408, Chittoor(Dt)

SEMESTER-IV
COURSE – 10: MANAGEMENT OF DISEASES IN HORTICULTURAL CROPS
Practical **Credits – 1** **2 hrs/week**

I. Laboratory Orientation

1. **Familiarization with Plant Pathology Laboratory** – tools, glassware, chemicals, microscopes, sterilization methods.
2. **Collection and Preservation of Diseased Plant Specimens** – fruits, vegetables, ornamentals, plantation crops.
3. **Field Diagnosis of Diseases** – recognition of disease symptoms in fruits, vegetables, and ornamental crops.
4. **Study of Major Diseases:**
 - Powdery mildew, downy mildew, anthracnose, wilt, blight, leaf spots, viral mosaics in horticultural crops.
5. **Methods of Disease Management** – cultural, mechanical, biological, and chemical practices.
6. **Fungicide Preparation and Application Techniques** – spraying, dusting, soil drenching.
7. **Integrated Disease Management (IDM) Practices** – combining cultural, biological, and chemical methods in selected horticultural crops.

II. Suggested activities:

A. Measurable:

1. Seminar Topics

- Integrated Disease Management (IDM) in Fruit Crops
- Major Fungal Diseases of Vegetables and Their Control
- Role of Biological Control Agents in Disease Management
- Post-Harvest Diseases of Horticultural Produce
- Viral Diseases in Horticultural Crops: Identification and Management
- Use of Resistant Varieties and Biotechnology in Disease Management

2. Student Study Projects

- Survey and Documentation of Major Diseases in Local Horticultural Fields.
- Comparative Study of Organic vs. Chemical Fungicides on Tomato Blight
- Effectiveness of Trichoderma spp. Against Soil-Borne Diseases in Nursery Plants.
- Disease Forecasting Models for Powdery Mildew in Grapes
- Study on Post-Harvest Disease Management Using Natural Coatings
- Evaluation of IDM Practices in a Selected Horticultural Crop

3. Assignments

- Write a detailed note on symptoms, causes, and control of anthracnose in mango.
- Explain the steps involved in developing an Integrated Disease Management (IDM) schedule for tomato.
- Describe major bacterial diseases in horticultural crops and their management.
- Discuss seed treatment methods and their importance in disease prevention.
- Explain disease management in protected cultivation (polyhouse/greenhouse).
- Write an essay on the role of quarantine and certification in preventing disease spread.

MODEL QUESTION PAPER
COURSE – 10: MANAGEMENT OF DISEASES IN HORTICULTURAL CROPS
Times: 3 Hours **Maximum Marks: 75**

SECTION – A

(Answer ANY FIVE questions. Each question carries 3Marks) (5 × 3 = 15 Marks)

1. Write short notes on Citrus canker – its symptoms and management practices.
2. Describe the symptoms and control measures of wilt disease in Guava.
3. Explain the symptoms and management of downy mildew disease in grapevine.
4. Write short notes on Apple scab disease – causal organism, symptoms, and control.
5. What are the symptoms and control measures of bacterial wilt in Brinjal?
6. Write short notes on early blight of Tomato – causal organism and management.
7. Explain the symptoms and management of downy mildew in cucurbits.
8. Write short notes on rust disease of beans – symptoms and control measures.
9. Describe the symptoms and management of stem bleeding disease in Coconut.
10. Write short notes on dieback disease of Rose – causal organism and control.

SECTION – B

(Answer any ONE question from each Unit. Each question carries 12 Marks) (5 × 12 = 60 Marks)

UNIT – I

11. A. Explain the symptoms, causal organisms, disease cycle

OR

- B. Describe the causes, symptoms, and control measures of major diseases of Guava

UNIT – II

12. A. Discuss in detail the symptoms, causal organisms, and integrated disease management

OR

- B. Write notes on important diseases of apple and peach — including their etiology, symptoms, and control

UNIT – III

13. A. Explain the major diseases of chilli and brinjal — their symptoms, causal organisms, and integrated management.

OR

- B. Describe the important diseases of tomato and okra — including damping-off, early blight

UNIT – IV

14. A. Explain the causes, symptoms, and management of white rust, downy mildew

OR

- B. Write short notes on important diseases of cucurbits, beans, and coriander

UNIT – V

15. A. Describe the symptoms, causal organisms, and management practices of coconut

OR

- B. Write in detail about the major diseases of turmeric, ginger, rose, and chrysanthemum

4- Year UG Honours, Major
Syllabus
(2026-27)
Semester-IV

Model Question Paper

Time : 3hrs

Marks:75

Part-A

Answer any Five Questions. Each Question carries 3 Marks.

5x3=15

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

Answer the following questions. Each question carries 12 Marks

5x12=60

11. a) Unit-I
(Or)
b) Unit-I

12. a) Unit-II
(Or)
b) Unit-II

13. a) Unit-III
(Or)
b) Unit-III

14. a) Unit-IV
(Or)
b) Unit-IV

15. a) Unit-V
(Or)
b) Unit-V