INSTITUTE	**FACULTY OF AGRICULTURE**
PROGRAM	**BACHELOR OF SCIENCE (Hons.) AGRICULTURE**
SEMESTER	**5**
COURSE TITLE	**DISEASES OF FIELD AND HORTICULTURAL CROPS AND THEIR MANAGEMENT - I**
COURSE CODE	**16AS0508**
COURSE CREDITS	**3**

Objective:

1 To provide the information regarding pathogen biology, epidemiology and disease symptoms of field and horticultural crops.

2 To provide the Integrated management practices of diseases of field and horticultural crops.

Course Outcomes: After completion of this course, student will be able to:

1 Students will able to understand disease cycle of field and horticultural crop diseases.

2 Students will able to identify the symptoms of diseases.

3 Students will able to get the knowlwdge regarding strategies for disease management.

4 Students will able to apply different combinational strategies for the management of plant diseases.

Pre-requisite of course: To aware students about different diseases of field and horticultural crops and their management.

Teaching and Examination Scheme

Theory Hours	Tutorial Hours	Practical Hours	ESE	IA	CSE	Viva	Term Work
2	0	2	50	30	20	25	25

Contents : Unit	Topics	Contact Hours
1	**1** Rice: blast, brown spot, bacterial blight, sheath blight, false smut, khaira and tungro	2
2	**2** Maize: stalk rots, downy mildew, leaf spots	1
3	**3** Sorghum: smuts, grain mold and anthracnose, Bajra :downy mildew, smut and ergot	1
4	**4** Groundnut: early and late leaf spots, collar rot, stem and pod rot, bud necrosis, Afla rot	2

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Contents : Unit	Topics	Contact Hours
5	**5** Sesamum: Phyllody, stem rot and leaf spot	2
6	**6** Soybean: Rhizoctonia blight and mosaic	1
7	**7** Pigeonpea: Phytophthora blight, wilt and sterility mosaic	2
8	**8** Finger millet: Blast and leaf spot; Black & green gram: Cercospora leaf spot and anthracnose, powdery mildew and yellow mosaic	1
9	**9** Castor: Wilt and root rot	2
10	**10** Tobacco: Damping off, black shank, frog eye, leaf curl and mosaic	1
11	**11** Banana: Panama wilt, bacterial wilt, Sigatoka and bunchy top	2
12	**12** Papaya: foot rot, leaf curl and mosaic	2
13	**13** Pomegranate: bacterial blight and leaf spot	1
14	**14** Brinjal: Phomopsis blight and fruit rot and little leaf	1
15	**15** Tomato: early and late blight, buck eye rot and leaf curl and tomato spotted wilt	1
16	**16** Okra: Yellow Vein Mosaic and root knot nematode; Beans: anthracnose and bacterial blight; Colocasia: Phytophthora blight	2
17	**17** Coconut: wilt, stem bleeding and bud rot	1
18	**18** Tea: blister blight; Coffee: rust; Cluster bean: powdery mildew, bacterial blight and bean common mosaic	2
Total Hours		**27**

Suggested List of Experiments:

Contents : Unit	Topics	Contact Hours
1	**1** Introduction about Pathogens, Its Structures and Symptoms produced due to host-pathogen interaction	2
2	**2** Histopathological changes in Plant disease	2

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Suggested List of Experiments:

Contents : Unit	Topics	Contact Hours
3	**3** Identification and histopathological studies of Phyllody Disease of Sesame	2
4	**4** Identification and histopathological studies of wilt disease of cotton	2
5	**5** Identification and histopathological studies of Downy mildew disease of Pearlmillet	2
6	**6** Identification and histopathological studies of Little leaf of Brinjal	2
7	**7** Identification and histopathological studies of SMD of Pigeonpea	2
8	**8** Identification and histopathological studies of root rot disease of groundnut	2
9	**9** Identification and histopathological studies of sigatoka leaf spot of banana	2
10	**10** Method of collection and preservation of plant diseased specimens for Herbarium.	2
11	**11** Field visit for the diagnosis of field problems	2
Total Hours		**22**

Textbook :

1 NA, NA, NA, NA

References:

1 Introductory plant pathology, Introductory plant pathology, R. Singh and H. S. Chaube, CBS, 2017

2 Plant Pathology, Plant Pathology, G. N. Agrios, Academic Press, 2005

3 A text book of fungi, bacteria and virus, A text book of fungi, bacteria and virus, H. C. Dubey, Agribios India, 2007

Suggested Theory Distribution:

The suggested theory distribution as per Bloom's taxonomy is as follows. This distribution serves as guidelines for teachers and students to achieve effective teaching-learning process

Distribution of Theory for course delivery and evaluation

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Remember / Knowledge	Understand	Apply	Analyze	Evaluate	Higher order Thinking
25.00	25.00	20.00	10.00	10.00	10.00

Instructional Method:

1 The course delivery method will depend upon the requirement of content and need of students. The teacher in addition to conventional teaching method by black board may also use any of tools such as demonstration, role play, quiz, brainstorming, MOOCs etc.

2 The internal evaluation will be done on the basis of continuous evaluation of students in the class-room.

3 Practical examination will be conducted at the end of semester for evaluation of performance of students in laboratory.

4 Students will use supplementary resources such as online videos, NPTEL videos, e-courses, Virtual Laboratory.

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