RAMA UNIVERSITY, UTTAR PRADESH, KANPUR

Faculty of Agricultural Sciences and Allied Industries

SYLLABUS & EVALUATION SCHEME

[Effective from the Session 2024-25]

M.Sc. (Ag) Plant Pathology

Faculty of Agricultural Sciences & Allied Industries
Rama University, Uttar Pradesh, Kanpur
Course Detail and Evaluation Scheme
(Effective from the Session 2024-25)

M.Sc.(Ag.) Plant Pathology FIRST YEAR (SEMESTER-I)

S.N.	Subject Code	Subject Name	Period			Evaluation Scheme			Subject Total	Credit Hours
			L	T	P	CE	MTE	ETE		
Theory subjects										
1	MSPP-101	Mycology	2	0	0	20	20	60	100	2
2	MSPP-102	Plant Virology	2	0	0	20	20	60	100	2
3	MSPP-103	Plant Bacteriology	2	0	0	20	20	60	100	2
4	MSPP-104	Principles of Plant Pathology	3	0	0	20	20	60	100	3
5	MAS-104	Computer Application**	2	0	0	20	20	60	100	2
Practical's / Project										
1	MSPP-151	Mycology	0	0	1	30	20	50	100	1
2	MSPP-152	Plant Virology	0	0	1	30	20	50	100	1
3	MSPP-153	Plant Bacteriology	0	0	1	30	20	50	100	1
4	MAS-153	Computer Application	0	0	1	30	20	50	100	1
Total			**11**	**0**	**4**	**220**	**180**	**500**	**900**	**15**

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M.Sc.(Ag.) Plant Pathology FIRST YEAR (SEMESTER-II)

S.N.	Subject Code	Subject Name	Period			Evaluation Scheme			Subject Total	Credit Hours
			L	T	P	CE	MTE	ETE		
Theory subjects										
1	MSPP-201	Principles of Plant disease management	2	0	0	20	20	60	100	2
2	MSPP-202	Diseases of fruits, plantation and ornamental crops	2	0	0	20	20	60	100	2
3	MSPP-203	Diseases of vegetables and spices crops	2	0	0	20	20	60	100	2
4	MAS- 205	Experimental Design**	2	0	0	20	20	60	100	2
Practical's / Project										
1	MSPP-251	Principles of Plant disease management	0	0	1	30	20	50	100	1
2	MSPP-252	Diseases of fruits, plantation and ornamental crops	0	0	1	30	20	50	100	1
3	MSPP-253	Diseases of vegetables and spices crops	0	0	1	30	20	50	100	1
4	MAS- 255	Experimental Design	0	0	1	30	20	50	100	1
5	MSPP-254	Master's Seminar	0	0	1	0	0	0	100	1
6	MSPP-255	Master Research Synopsis	0	0	1	Satisfactory/Unsatisfactory				1
	Total		**8**	0	**6**	**200**	**160**	**440**	**900**	**14**

**** Basic supporting course**

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M.Sc.(Ag.) Plant Pathology SECOND YEAR (SEMESTER-III)

S.N.	Subject Code	Subject Name	Period			Evaluation Scheme			Subject Total	Credit Hours
			L	T	P	CE	MTE	ETE		
Theory subjects										
1	MSPP-301	Chemicals in Plant disease management	2	0	0	20	20	60	100	2
2	MSPP-302	Biological control of plant Diseases	2	0	0	20	20	60	100	2
3	MSPP-303	Integrated Diseases management	2	0	0	20	20	60	100	2
4	MSPP-304	Epidemiology and forecasting of plant Diseases	2	0	0	20	20	60	100	2
5	MSPP-305	Plant quarantine	2	0	0	20	20	60	100	2
6	PGS-301	History of Agriculture*	1	0	0	20	20	60	100	1
Practical's / Project										
1	MSPP-351	Chemicals in Plant disease management	0	0	1	30	20	50	100	1
2	MSPP-352	Biological control of plant Diseases	0	0	1	30	20	50	100	1
3	MSPP-353	Integrated Diseases management	0	0	1	30	20	50	100	1
4	MSPP-354	Epidemiology and forecasting of plant Diseases	0	0	1	30	20	50	100	1
5	MSPP-355	Master Research	0	0	1	Satisfactory/Unsatisfactory				1
Total			**11**	0	**5**	**240**	**200**	**560**	**1000**	**16**

*** Minor Course**

Faculty of Agricultural Sciences & Allied Industries
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Course Detail and Evaluation Scheme
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M.Sc.(Ag.) Plant Pathology SECOND YEAR (SEMESTER-IV)

S.N.	Subject Code	Subject Name	Period			EVALUATION SCHEME			Subject Total	Credit
			L	T	P	CE	MTE	ETE		
1.	MSPP-402	Master's Research (Research Work & Thesis/project)	Satisfactory/ Non satisfactory							18
			Satisfactory/Unsatisfactory							**18**

Evaluation Scheme:
L-Lecture, T-Tutorial, P- Practical, CE- Continuous Evaluation, MTE-Mid Term Examination, ETE-End Term Examination

- **Course without practical components**

For Continuous Evaluation (CE) is such as: 20 Marks
1 Attendance: 5 Marks
2 Assignments/Quiz / Seminar/Term paper /Project :15Marks
MTE - Mid Term Examination: 20 Marks
a. First Mid Term Examination: 10 marks
b. Second Mid Term Examination: 10 marks
ETE - End Term Examination: 60 Marks

- **Course with practical components only**

For Continuous Evaluation (CE) is such as: 30 Marks
Conduct / Perform/Execution /Practical File/ Viva-Voice
MTE - Mid Term Examination: 20 Marks
a. First Mid Term Examination: 10 marks
b. Second Mid Term Examination: 10 marks
ETE - End Term Examination: 50 Marks

Convener

Signature:
Name :
Date : 11/5/24

Internal Members

Signature 1:
Name: Dr. Kartikay Bisen
Date:

Semester-I

MSPP-101: MYCOLOGY

L	T	P	CR
2	0	1	3

Course objective:-

1. Discuss the importance of fungi in various ecological roles.
2. Demonstrate an understanding of how fungi impact human affairs.
3. Outline the higher taxonomy of the fungi and how the fungi relate to other organisms.
4. Discuss the characteristics of the major classes and orders within the fungal kingdom.
5. Demonstrate a working knowledge of how fungi grow and reproduce, and where and how they can be isolated.

Detail Contents

Unit: 1- 20%
Unit: 2- 20%
Unit: 3- 40%
Unit: 4- 10%

Unit 1

To study the nomenclature, classification and characters of fungi. Theory Introduction, definition of different terms, basic concepts.

Unit 2

Importance of mycology in agriculture, relation of fungi to human affairs, history of mycology. Concepts of nomenclature and classification, fungal biodiversity, reproduction in fungi.

Unit 3

The comparative morphology, ultrastructure, characters of characters of different phylum of fungi up to generic level: i) Chytridiomycota ii) Neocallimastigomycota iii) Blastocladiomycota iv) Glomeromycota v) Ascomycota, vi) Basidiomycota, vii) Deuteromycota. viii) Oomycota, PlasmadiophoromycetesUnit 4
Lichens types and importance, fungal genetics and variability in fungi.

Practical

Practical Isolation and identification of plant pathogenic fungi from different sources; Preservation and maintenance of fungal cultures; Study of different reproductive structures obtained under in vivo ans in vitro by camera Lucida drawing and microphotography; Detailed comparative study of different groups of fungi; collection, identification and preservation of specimens. Identification of plant pathogenic fungi. i.e. *Pythium* , *Phytophthora, Sclerospora,Peronospora, Plasmopara* and *Albugo* , *Rhizopus* and *Mucor* , *Erysiphe, Glomerella* , *Puccinia, Uromyces, Melampsora* , *Ustilag Neovossia, Fusarium, Cercospora, Helminthosporium, Cercospora*. Fungal morphologyDetermination of size by micrometric method. Use of haemocytometer for standardization of spore suspension. Isolation of soil fungi by serial dilution technique by using different media

Course Learning Outcomes (CLO)

1. Assessment methods may include written and practical examinations, homework assignments and discussion activities.