

TEACHING PLAN: Principles of Integrated Pest and Disease Management

SCHOOL: (SOAS) SCHOOL OF AGRICULTUR AL SCINCES		ACADEMIC SESSION: 2022 – 2023		FOR STUDENTS’ BATCH: 2020-2024		
1	Course No.	APP-T-301				
2	Course Title	Principles of Integrated Pest and Disease Management				
3	Credits	3+1				
4	Learning Hours		Contact Hours	72		
			Assessment	9		
			Guided Study	9		
			Total hours	90		
5	Course Objective	1. Basics knowledge of Pest Management 2. Knowledge of tools of Integrated Pest Management 3. Basics of different methods of management 4. Ecological management of crop environment 5. Survey surveillance and forecasting of Insect pest and diseases 6. IPM study –Implementation and impact of IPM (IPM module for Insect pest and disease				
6	Course Outcomes	1. Students knowledgeable about the effects of biotic and abiotic factors on insect development, population growth, species interactions, physiological requirements and insect behaviour. 2. Students are skilled in determining pest levels and impact on plant and animal hosts and the management of these pests by Integrated Pest Management approach. 3. To be able to address complex problems facing entomology or toxicology professionals taking into account related ethical, social, legal, economic, and environmental issues. 4. To be able to surveillance and forecasting of insect pests and assessment of insect pest population and recent pest outbreaks and manage them by using different tools and recent methods pest management. 5. To Understands about different classes of insecticides, their formulation, toxicity, poisoning, first aid and antidotes and their effect on plants, animals and environment.				
7	Outline syllabus:					
7.01	Paper Code	Unit	Introduction		Page Numbers ¹	Lect ures
7.02	APP-T-301	Unit I (Basic Introduction)	1. Categories of insect pests and diseases, 2. IPM: Introduction, history, importance, concepts, principles and tools of IPM. 3. Economic importance of insect pests, diseases and pest risk analysis.			1 2 1
		Unit II (Irrigation & Water management)	1. Methods of detection and diagnosis of insect pest and diseases. 2. Calculation and dynamics of economic injury level and importance of Economic threshold level. 3. Methods of control: Host plant resistance, cultural, mechanical, physical, legislative, biological and chemical control.			1 2 2
		Unit III (Weed Management)	1. Ecological management of crop environment. 2. Introduction to conventional pesticides for the insect pests and disease management. 3. Survey surveillance and forecasting of Insect pest and diseases.			1 1 1

			4. Development and validation of IPM module.		1
		Unit IV (Growth & Development & Plant Ideotype)	1. Implementation and impact of IPM (IPM module for Insect pest and disease. 2. Safety issues in pesticide uses. 3. Political, social and legal implication of IPM. 4. Case histories of important IPM programmes. 5. Case histories of important IPM programmes.		2 1 1 1 1
8	Course Evaluation				
8.1	CA: 10%				
8.1.1	Attendance	25 %			
8.1.2	Homework	2 Assignments, 50%			
8.1.3	Quizzes	2 Quizzes, 25%			
8.1.4	Projects	-			
8.1.5	Presentation	-			
8.1.6	Any other	Practical Examination- 30%			
8.2	MTE	10%			
8.3	End-term examination: 50%				
9	Text Books & References				
9.1	Text book	1.			
9.2	References	1. Gopal Chandra De. 1980., Fundamentals of Agronomy. Oxford and IBH Publishing Co. Ltd., Bangalore. 2. Hand book of Agriculture, ICAR Publication. 3. Palaniappan, S.P., Cropping Systems in the tropics – Principles and Practices. Willey Eastern Ltd., New Delhi. 4. Panda, S.C., 2006. Agronomy Agribios Publication, New Delhi. 5. Reddy, S.R. Principles of Agronomy Kalyani Publishers, Ludhiana, India. 6. Sankaran, S and Subbiah Mudliyar, V.T., 1991. Principles of Agronomy. The Bangalore Printing and Publishing Co. Ltd., Bangalore. 7. Rao V.S. (2006), Principles of Weed Science. Oxford and IBH Publishing Co., New Delhi, India. 8. Gupta, O.P. (2008), Modern Weed Management Agribios India Publication.			
9.3	Video References	1.			

Outcome no. → Syllabus topic↓	1	2	3	4	5
Paper Code. Unit I (1)	✓				✓
Paper Code. Unit I (2)	✓	✓	✓	✓	
Paper Code. Unit I (3)	✓	✓	✓	✓	
Paper Code. Unit II (1)	✓	✓	✓	✓	
Paper Code. Unit II(2)	✓	✓	✓	✓	
Paper Code. Unit II(3)	✓	✓	✓	✓	
Paper Code. Unit III (1)	✓	✓	✓	✓	
Paper Code. Unit III (2)	✓	✓	✓		
Paper Code. Unit IV (1)	✓	✓	✓		
Paper Code. Unit IV (2)	✓	✓	✓	✓	✓
Paper Code. Unit IV (3)	✓	✓	✓		✓
Paper Code. Unit IV (4)	✓	✓	✓		✓
Paper Code. Unit IV (5)	✓	✓	✓		
Paper Code. Unit IV (6)	✓	✓	✓		
Paper Code. Unit IV (7)	✓	✓	✓	✓	

QUESTION BANK

Section A

UNIT-I

1.