Module (Course Syllabus) Catalogue

2022-2023

College/ Institute	Khabat Technical Institute
Department	Plant protection
Module Name	Orchid diseases
Module Code	ORD302
Degree	Technical Diploma / Bachelor High Diploma Master PhD
Semester	4
Qualification	MSc. Plant Protection
Scientific Title	Assistant Lecture
ECTS (Credits)	8
Module type	Prerequisite Core Assist. /
Weekly hours	5
Weekly hours (Theory)	(2)hr Class (4)Total hrs Workload
Weekly hours (Practical)	(3)hr Class (4.5)Total hrs Workload
Number of Weeks	12
Lecturer (Theory)	Ayoub Ibrahim Ahmed
E-Mail & Mobile NO.	ayoub.ahmed@epu.edu.iq 07504529388
Lecturer (Practical)	Ayoub Ibrahim + Runj M. Mazer
E-Mail & Mobile NO.	runj.mazher@epu.edu.iq 07504511509
Websites	https://epu.edu.iq/

Course Book

Course Description	Describe and covered the different orchid diseases and pathogens with the favourite climate for pathogens and their control.
Course objectives	General objective / aim The general aim of this course is to equip students with knowledge and skills to develop and implement disease name (common name), pathogen name and management strategies for horticulture plants. Introduce students to the most important horticulture losses caused by the disease and to isolate and diagnose pathogens in laboratory Describe a range of pathological problems that affect plants. Describe symptoms of a range of diseases that affect plants. Describe disease life cycles and explain how this knowledge can be applied in disease control Explain the methods used to control diseases Demonstrate a comprehensive knowledge of a particular plant pathogen. Identify and describe a range of non-infectious diseases and problems that affect plants Identify and describe a range of common pathogens that affect ornamental plants. Identify and describe a range of common pathogens that affect crop plants
Student's obligation	1- Seminar 2- Presentation 3- Homework 4- Group Report 5- Quiz

	6- Collecting Samples
Required Learning Materials	Chemical materials to prepare slides to see plant pathogens such as fungi, nematodes and bacteria Microscope

Evaluation

	Task	Weight (Marks)	Due Week	Relevant Learning Outcome
	Paper Review	8	3	8%
Assignments	Homework	14	3	14%
	Class Activity	2	2	2%
	Report	8	4	8%
	Seminar	8	4	8%
	Essay			
	Project			
	Quiz	4	2	4%
	Lab.			
	Midterm Exam	16	5	16%
	Final Exam	40	12	40%
	Total			

Specific learning outcome:

1- 1- **Theory:** lecture, group discussion, seminar, pair work, group work, role play, case-based learning

2-Laboratory practice: Lecture, group discussion, workshop, skill demonstration, group work, role play, team teaching, case-based learning, self-training

3-Field practice: skill demonstration, case-based learning, group work, group discussion, clinical facilitation and debriefing, collecting samples, seminar, workshop.

4- **General:** library, computer suite with internet access

5- Laboratory with equipment for training, white board, computer with equipment for PowerPoint presentations, overhead projector, posters

Course References:

Tarr, S.A.J., 1972. Principles of plant pathology.

Macmillan International Higher Education.

Ainsworth, G.C., 1981. Introduction to the history of plant pathology. Cambridge University Press.

Watson, J.B., 2002. Orchid pests and diseases. American Orchid Society, Inc..

Agrios, G.N. 2005. Plant Pathology. 5th Edition. Academic Press, New York.

Barnes, E.H., 2012. Atlas and manual of plant pathology. Springer Science & Business Media.

Tronsmo, A.M. 2020. Plant Pathology and Plant Diseases

Course topics (Theory)	Week	Learning Outcome
Introduction to orchid disease with some definition and history of plant disease	1	
Solanaceae disease	2	
Solanaceae disease continue	3	
Broad bean disease	4	
Sunflower disease	5	
Apple and Pear disease	6	
Apple and Pear disease continue	7	
Citrus disease	8	

Grapes disease	9	
Olive Disease	10	
Stone fruit disease	11	
Ornamental plants disease	12	
Practical Topics	**Week**	**Learning Outcome**
Plant symptoms	1	
Fungi and Virus and disease severity index	2	
Bacteria and Nematode and disease incidence	3	
Solanaceae disease	4	
Solanaceae disease continue	5	
Broad bean disease	6	
Sunflower disease	7	
Apple and Pear disease	8	
Apple and Pear disease continue	9	
Citrus disease and Grapes disease	10	
Olive Disease and Stone fruit disease	11	
Ornamental plants disease	12	

Q/ Define the following terms?

1- Symbiosis 2- Hypertrophy 3- Facultative

4- Necrotrophs 5- Life Cycle

Q/ Write scientific name of the following diseases?

1- Late blight of potato 2- Tomato Vascular Wilt Disease

3-Early blight of tomato and potato 4- Chocolate spot of Broad bean

5- Broad bean rust

Q/ Several factors that may affect pathogen survival in soil and water may also favor disease development?

Q/ Write about disease cycle of Sclerotinia head rot of sunflower or draw life cycle ?

Q/Write ten plant disease containing fungal diseases, Bacterial Diseases, Nematode diseases and Virus diseases

Q/ Count Abiotic disorders and describe one of them?