

Semester:	07		
Course code:	ZOOL 41842		
Course Name:	Nematode Pest Management		
Credit Value:	02		
Compulsory/Optional	Compulsory		
Pre requisites	ZOOL 32742		
Co-requisites	None		
Hourly Breakdown	Theory	Practical	Independent Learning
	22	24	54

Course Aim/Intended Learning Outcomes:

After completion of this course unit, the student will be able to:

1. identify plant parasitic nematodes as pests of agricultural and horticultural crops,
2. describe the types of injury, damage symptoms and life histories of plant parasitic nematodes,
3. calculate the threshold injury level and crop loss due to nematode infestations,
4. recommend suitable management practices and preventive measures for plant parasitic nematode infestations in economically important crops in Sri Lanka,
5. discuss quarantine regulations procedure implemented in Sri Lanka against plant parasitic nematodes,
6. demonstrate practical skills in identification of plant parasitic nematodes and their damage symptoms, and
7. quantify nematode populations in a crop field using appropriate sampling techniques.

Course Content:

Introduction to nematodes and general characteristics of plant parasitic nematodes; nematode interactions with the host plant; Root-knot nematodes, lesion and burrowing nematodes, cyst nematodes; Ecto-parasitic nematodes as plant virus vectors; Injury caused by plant parasitic nematodes to host plant and their symptoms; The economic threshold level of nematode infestation and calculation of crop loss; Nematode parasites of tea, rice, fruit and vegetable crops and other economically important crops in Sri Lanka and their management; Globally reported nematode parasites as regulated pests of Sri Lanka and quarantine practices adopted against them; Soil/plant sampling and extraction for accurate identification and population studies of parasitic nematodes.

Practical sessions on identification of root-knot, lesion, burrowing and cyst nematodes. Handling plant parasitic nematodes, preservation and slide mounting for identification; Soil survey and extraction of nematodes; Field study at the National Plant Quarantine Services Centre

Teaching /Learning Methods:

A combination of lectures, laboratory and field sessions, case studies, assignments, self-studies, computer assisted learning, and group discussions/presentations.

Assessment Strategy:

Continuous assessment and end of course examination. Percentage given for each sub-component indicates the percent contribution to the final marks.

Continuous Assessment 40 %		Final Assessment 60 %		
Details:		Theory	Practical	Other
Assignments	10 %	50 %	10 %	-
Case study	10 %			
Presentations	10 %			
Laboratory reports	10 %			
Recommended Readings:				
<ol style="list-style-type: none"> 1. Sikora, R.A., D. Coyne, J. Hallmann, P.Timper (2018). Plant Parasitic Nematodes in Subtropical and Tropical Agriculture, 3rd edition, CAB International, Wallingford, UK. 2. Laboratory Manual for Plant Nematology (2021). Department of Zoology and Environmental Management, University of Kelaniya. 				