

UNIVERSITY OF MADRAS
M.Sc. DEGREE PROGRAMME IN ZOOLOGY
 SYLLABUS WITH EFFECT FROM 2023-2024

931SEC4

Course Objectives:		
The main objectives of this course is		
	Students should know basic concepts and techniques in Sericulture.	
Course	:	<u>Skill Enhancement Course– 4</u>
Course title	:	Sericulture
Credits	:	2
Pre-requisite:		
Students should be aware of economic and cultural importance of sericulture.		
Expected Course Outcome:		
Upon completion of this course, Students would have		
I	To understand the various practices in sericulture. To know the needs for sericulture and the status of India in global market.	K2 & K3
II	Able to apply the techniques and practices needed for sericulture.	K1, K2 & K3
III	To know the difficulties in sericulture and be able to propose plans against it.	K5 & K6

K1- Remember; **K2-** Understand; **K3-** Apply; **K4-**Analyze; **K5-**Evaluate; **K6-** Create

Units	
I	Introduction to textile fibers; types- natural and synthetic fibers; sources of silk fiber- Tasar, Muga, Anaphe, Gonometa, Fagara, spider and mussel; properties and importance of silk fiber. History, development, status, characteristics and advantages of sericulture in India.
II	Host plants; Moriculture- distribution, morphology, propagation- seedling, cutting, grafting, layering and micropropagation methods, maintenance- irrigation, manuring and pruning, pests and diseases of mulberry.
III	<i>Bombyx mori</i> - morphology, anatomy, life cycle, geographical locations, larval moults, voltinism, indigenous and commercial races. Diapause. Egg-storage and transportation.
IV	Rearing houses and equipment: Rearing operations- disinfection, brushing, feeding and spacing. Moulting and spinning. Harvest, Rearing methods- chawki, lasso, showa, shelf-rearing, floor-rearing and shoot rearing. Diseases of <i>Bombyx mori</i> - protozoan, bacterial, viral and fungal. Pests of silkworm- Uzi fly, desmestids, mites, ants, nematodes, aves and mammals.
V	Physical and commercial characteristics of cocoons. Cocoon harvesting and marketing. Cocoon sorting, stiffling, deflossing, riddling, cooking, brushing, reeling and re-reeling. Weaving. By-products of sericulture industry, Economic importance of Sericulture, CSB .

Reading list

1. G. Ganga and J. Sulochana Chetty. 2019. An introduction to sericulture, 2nd edition, Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi.
2. M. Johnson and M. Kesary. 2019. Sericulture, Saras publication, Tamilnadu.

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| 3. Singh, Amardev & Ravinder Kumar. 2013. Sericulture handbook Vol 1, Biotech. |
| 4. M. Madan Mohan Rao. An Introduction to Sericulture, 2 nd edition, BS Publications. |

Recommended websites

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| 1. https://agritech.tnau.ac.in/sericulture/ |
| 2. https://csb.gov.in/ |

Mapping with Programme Outcomes*										
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CO1	M	L	L	L	L	L	M	S	L	L
CO2	L	M	L	M	L	M	M	S	M	L
CO3	M	S	L	L	L	M	L	L	M	S
CO4	M	S	M	S	M	M	L	L	S	S
CO5	M	M	L	M	M	L	L	L	L	M

*S - Strong; M - Medium; L- Low