

## SERICULTURE

Semester	Subject Code	Category	Lecture		Theory		Practical	Credits
			Hrs/ week	Total Hours/ Semester	Hrs/ week	Total Hours/ Semester		
IV		Elective IV	3	45	3	45	Nil	3

### COURSE OBJECTIVES:

- \*To know the Biology of silkworm, their economic importance and methods in sericulture.
- \* To develop sericulture is a need-based curriculum.

### COURSE OUTCOMES:

On the successful completion of the course, students will be able to:

CO Number	CO Statement	Knowledge Level (K1-K4)
CO1	To Understand the concept and structure of silkworm	K2
CO2	To gain knowledge about the types of mulberry	K3
CO3	To understand about the development, reproduction and genetical methods	K2
CO4	To apply modern control techniques about viral, fungal and bacterial diseases of mulberry.	K3
CO5	To motivate the students for their self employment opportunities and hatching and marketing methods	K3&K4

Knowledge Level : K1-Remember ; K2 –Understand ; K3 – Apply ; K4 – Analyze

### MAPPING WITH PROGRAMME OUTCOME:

COS	PO1	PO2	PO3	PO4	PO5
CO1	S	M	S	S	M
CO2	M	S	M	S	S
CO3	S	M	S	M	M
CO4	M	S	M	S	S
CO5	S	M	S	M	M

S- Strong; M – Medium; L- Low

DISTRIBUTION OF MARKS: THEORY 100%

## **UNIT -I**

**9 Hours**

### **BIOLOGY OF SILKWORM**

Introduction of sericulture -as cottage industry-Prospects and status - Silk producing species - their distribution - Bombyx mori - life cycle - organization of larvae, pupae and moth - structure of the silk gland. Economic importance

## **UNIT-II**

**9 Hours**

### **MORICULTURE**

Mulberry - varieties - distribution - methods of cultivation and preparation - Harvest - Transport and preservation of leaves. Feeding and nutrition - specificity of diet - Factors of nutrition - Diet and growth. Pest and diseases of mulberry.

## **UNIT-III**

**9 Hours**

### **GROWTH AND DEVELOPMENT OF SILKWORM**

Growth and Development of silkworms -Morphology of male female moths-Incubation - Hatching - brooding -silkworm seed production, embryonic growth, Hibernation of eggs,- Physiology of molting in different varieties (Uni, bi and multivoltine)

## **UNIT-IV**

**9 Hours**

### **DISEASES OF SILKWORMS**

Pathology - Viral, bacterial, fungal and protozoan diseases -Pebrine, Flacherie, Grasserie, Muscardine-causative agents, symptoms and control measures. Pest-Uzi fly. Beetles and other animals and their control menace.

## **UNIT-V**

**9 Hours**

### **SILKWORM REARING AND SILK REELING**

Principles of Rearing-Rearing house, Rearing equipments, Rearing operations -Maintenance of environmental conditions for rearing, -Brushing Care at Moulting, Mounting and Harvesting of cocoons. Reeling techniques - lacing spinning. Re-reeling.

**TEXT BOOKS**

<b>S. NO</b>	<b>AUTHORS</b>	<b>TITLE</b>	<b>PUBLISHERS</b>	<b>YEAR OF PUBLICATION</b>
1.	Ganga, G. and Sulochana Chetty	An Introduction to Sericulture	Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi	1997
2.	Hisao Aruga	Principles of Sericulture	Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi	1994
4.	Mahadevappa,D., Halliyal, V.G., Shankar, D.G. and Bhandiwad, R.	Mulberry Silk Reeling Technology	Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi.	2000

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<b>S. NO</b>	<b>AUTHORS</b>	<b>TITLE</b>	<b>PUBLISHERS</b>	<b>YEAR OF PUBLICATION</b>
1.	Eikichi Hiratsuka.	Silkworm Breeding	Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi.	1999
2.	Ganga, G.	Comprehensive Sericulture Vol-II: Silkworm Rearing and Silk Reeling.	Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi.	2003
3.	Soo-Ho Lim, Young-Taek Kim, Sang-Poong Lee.	Sericulture Training Manual	Published by FAO - USA. Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi.	1990
4.	Wu Pang-Chuan and Chen Da-Chuang.	Silkworm Rearing	Published by FAO - USA. Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi	1994

**WEB SOURES:**

[www.sciencedaily.com](http://www.sciencedaily.com)

[www.sciencemag.com](http://www.sciencemag.com)

[www.treehugger.com](http://www.treehugger.com)

[www.nature.com](http://www.nature.com)

**TEACHING METHODOLOGY**

- Class room teaching
- Assignments ,Seminars and Models
- Group Discussions
- Home test
- PPT Presentations
- Board and chalk
- Demonstration from the Video slides, Animated videos and interactive software.

**SYLLABUS DESIGNERS**

- Dr D.Sasikala, Assistant Professor & HOD
- Dr.V.Kiruthiga, Assistant Professor
- Dr V.Rekha, Assistant Professor
- DrA.Vinodhini, Assistant Professor
- Dr.G.Vidhya, Assistant Professor
- Dr. S. Vijayakumari, Assistant Professor