

**ORIENTAL COLLEGE (AUTONOMOUS), TAKYEL,  
IMPHAL**

**TEACHING PLAN**

**(B.A/B.Sc.)**

**Name of Department: Zoology**

**Semester –2<sup>nd</sup> Semester- 2022-23**

**Paper Name: Sericulture Code: SE-502**

<b>No. of Hours per Week</b>	<b>Credits</b>	<b>Total No. of Hours</b>	<b>Marks</b>
4	4	60	100

**Learning objectives:**

- It also involves giving students a thorough knowledge about the cultivation of food plants, maintenance of the farm, seed technology, silkworm rearing and silk reeling. Train the students in identifying the diseases and pests of the food plants. Students get to learn about the quality of various things like leaf, seed cocoon, commercial cocoon and fibre so that they can get maximum return when actually practiced.

**Learning outcomes:**

- After completion of the course the students will be able to understand: Morphology of silkworm and its anatomical features like silk gland and secretion of silk.
- Scientific way of silkworm rearing technology of young and late age silkworm for raising assured cocoon crops.
- Must have an idea of characteristics of microbial organisms that causes diseases to silkworm. Control and prevention of pests and diseases

Unit	Section	Topic Lecture	Hours	Learning outcome	Pedagogy	Assessment / Evaluation
I	<b>Introduction and Biology of Silkworm</b>					
	1	Sericulture: Definition, history and present status; Silk route	4	Thrown light to the students how silk rearing is originated for the first time in China. Learnt about the silk route also	Lecture, PPT	MCQ, Short answers, Assignment, Quiz
	2	Types of silkworms, Distribution and Races - Exotic and indigenous races, Mulberry and non-mulberry Sericulture	8	Students acquired knowledge of different types of Silk-worms and their role in sericulture industry	PPT, Lecture	
3	Life cycle of Mulberry and Tasar silkworm, Structure of silk gland and secretion of silk	8	Understood the life cycle of silkworms so that silk worm rearing become a success	Lecture, PPT, Diagram		
II	<b>Rearing of Silkworms</b>					
	1	Selection of mulberry variety and establishment of mulberry garden	3	Students realized the importance of food plant (mulberry) and their un-interrupted supply for successful rearing of silkworm	Lecture, PPT, Picture	Classroom interaction, Home assignment, Discussion
	2	Rearing house and rearing appliances Disinfectants: Formalin, bleaching powder, Resham Keet Oushadh (RKO)	5	Explored the mode Taught about the preparation before introduction the silkworm larva	PPT, Lecture, Picture	
	3	Silkworm rearing technology: Early age and Late age rearing,	5	Learnt how to rear silkworm during early stage and late stage	Lecture, PPT	

		Description of types of mountages				
	4	Spinning, harvesting and storage of cocoons. Post cocoon processing – Stifling and reeling	7	Studied in detail processing of the cocoon to get silk thread	PPT, Lecture,	
III	<b>Pests and Diseases</b>					
	1	Pests of silkworm: Uzi fly, dermestid beetles and vertebrates	5	Identified and described the different pests of the silkworm	Lecture, PPT, Photograph	Short answer, Objective type questions, Assignment
	2	Pathogenesis of silkworm diseases: Protozoan, viral, fungal and bacterial	7	Learnt about the various parasites which infect silkworms	PPT, Lecture	
	3	Control and prevention of pests and diseases	5	Described controlling and prevention measures of pests and diseases	Lecture, PPT	
IV	<b>Prospects of Sericulture in India</b>					
	1	Sericulture industry in different states, potential in mulberry and non-mulberry sericulture.	10	Discussed the importance of mulberry based silkworm rearing and non mulberry.	Lecture, PPT	Short answer, Essay type question.
	2	Economic importance of silk	3	Described the importance of silk as a good quality fabric		

#### SUGGESTED READINGS

- Manual on Sericulture; Food and Agriculture Organisation, Rome 1976
- Handbook of Practical Sericulture: S.R. Ullal and M.N. Narasimhanna CSB, Bangalore
- Silkworm Rearing and Disease of Silkworm, 1956, Ptd. By Director of Ptg., Stn. & Pub. Govt. Press, Bangalore
- Appropriate Sericultural Techniques; Ed. M. S. Jolly, Director, CSR & TI, Mysore.
- Handbook of Silkworm Rearing: Agriculture and Technical Manual-1, Fuzi Pub. Co.Ltd., Tokyo, Japan 1972.

- Manual of Silkworm Egg Production; M. N. Narasimhanna, CSB, Bangalore 1988.
- Silkworm Rearing; Wupang—Chun and Chen Da-Chung, Pub. By FAO, Rome 1988.
- A Guide for Bivoltine Sericulture; K. Sengupta, Director, CSR & TI, Mysore 1989.
- Improved Method of Rearing Young age silkworm; S. Krishnaswamy, reprinted CSB, Bangalore, 1986.

Teachers : 1) Prof. R. K. Rajeshwari Devi

2) K. Uma Devi

3) Dr. L. Chitra Devi

4) Dr. H. Binota Devi