

DEPARTMENT OF BIOTECHNOLOGY					Certificate course			
Sem	Course Type	Course Code	Course Title	Credits	Contact Hours	CIA	Ext	Total
	Certificate course		Sericulture Technology		30	50	50	100

Course Objectives

1	To introduce fundamental concepts, tools and techniques of mulberry cultivation, silkworm rearing and silk reeling
2	To train the students in comprehensive silk production techniques
3	To make the students become an entrepreneur

Unit	Description	Hours
I	Introduction to Sericulture: History, scope and economic importance of sericulture - Sericulture industry in India and World - Silk boards: Central silk board, International Silk Commission – Seribiotech research – Silk worm seed Technology – Silk Technology	6
II	Cultivation of Mulberry: Taxonomy, morphology geographical distribution, and varieties of Mulberry plants, Optimum conditions for mulberry cultivation - Different methods of propagation - seedling, vegetative propagation (cutting, grafting and layering) – Irrigation, manuring - Harvesting and storage methods of leaves – Disease and management of mulberry plants (Bacterial, Fungal and Viral)	6
III	Silkworm and Rearing: Lifecycle of mulberry silkworm (<i>Bombyxmori</i>) –Silk Glands - Brief account on Eri, Tasar and Muga silkworms - Silkworm diseases: causes and prevention of Pebrine, Flacherie, Muscardine – Silkworm rearing: Disinfection, Brushing, Maintenance of optimum conditions for rearing, Feeding, Bed Cleaning, Spacing, Care during mounting, Mounting, Harvesting.	6
IV	Silk Reeling: Stifling, Storage of cocoons, sorting of cocoons, Deflossing, Cocoon riddling, Cocoon mixing, cocoon cooking, brushing – Reeling operations: reeling end formation, twisting, drying and reeling – Reeling appliances: country charkha, domestic basin, cottage basin and filatures – Re-reeling, Lacing – Silk Testing	6
V	By Products Technology and Entrepreneurship: By-products of Moriculture – By-products of rearing: use as compost, animal feed, suturing material, biogas plant, and pharmaceutical industry – By-products of grainage operation – By-products of reeling – Entrepreneurship opportunity: Silk Graft, silkworm egg production and supply, Chawki rearing, Silk dyeing and printing, Zari manufacturing.	6

Books for study

1. Johnson M and Kesary M. 2008. Sericulture. 4th edition
2. Ganga G and Sulochanachetty J. 2000. An Introduction to Sericulture. Oxford & IBH

Books for reference

1. Ravindranathan KR. 2003. Economic Zoology. Dominant Publishers and distributors
2. Venkatanarasaiah P. 2013. Sericulture. APH Publishing Corporation