

Course Code	Course Name	Credits
26ZY604	ORNAMENTAL FISH KEEPING	04

Course Objectives

- To understand the biology and diversity of ornamental fishes.
- To study aquarium construction, maintenance, and management practices.
- To gain knowledge about breeding, feeding, and health care of ornamental fishes.
- To understand the role of water quality and aquatic plants in aquarium management.
- To develop entrepreneurial skills in ornamental fish culture and trade.

Learning Outcomes

- Explain the morphology, classification, and economic importance of ornamental fishes.
- Demonstrate knowledge of aquarium setup and maintenance techniques.
- Analyze breeding and feeding methods used in ornamental fish culture.
- Apply disease prevention and water quality management practices in aquaria.
- Evaluate the commercial opportunities and sustainable practices in ornamental fish keeping.

Unit 1 – Introduction to Ornamental Fish Keeping (12 Hrs.)

History, scope, and importance of ornamental fish keeping; classification and diversity of ornamental fishes; freshwater and marine ornamental fishes; morphology and coloration of ornamental fishes; economic importance of ornamental fish industry.

Unit 2 – Aquarium Construction and Maintenance (12 Hrs.)

Types of aquaria; aquarium design and construction; aquarium accessories and equipment; filtration and aeration systems; aquarium lighting and decoration; maintenance and cleaning of aquaria.

Unit 3 - Water Quality and Aquarium Management (12 Hrs.)

Physical and chemical properties of water; temperature, pH, dissolved oxygen, hardness, and salinity; water quality management; aquatic plants and their role in aquaria; live food organisms for ornamental fishes; feeding and nutrition of ornamental fishes.

Unit 4 – Breeding and Health Management of Ornamental Fishes (12 Hrs.)

Breeding behavior of ornamental fishes; breeding techniques for live bearers and egg layers; hatchery management; larval rearing and fry management; common diseases of ornamental fishes; prevention and control of fish diseases and parasites.

Unit 5 - Ornamental Fish Trade and Entrepreneurship (12 Hrs.)

Packing and transportation of ornamental fishes; marketing and export potential of ornamental fishes; economics of ornamental fish culture; ornamental fish farming as entrepreneurship; government schemes and support for fish farmers; recent advances in ornamental fish keeping technology.

Reference Books:

1. Andrews, C. (1990). Manual of Fish Health. Salamander Books Ltd.
2. Axelrod, H.R. and Vorderwinkler, W. (1989). Encyclopedia of Tropical Fishes. T.F.H. Publications.
3. James, B. and Patrick, R. (2000). Ornamental Fish Culture and Aquarium Management. Agrobios Publishers.
4. Santhanam, R., Sukumaran, N., and Natarajan, P. (1987). A Manual of Freshwater Aquaculture. Oxford and IBH Publishing Co.
5. Swain, S.K., Sahu, A.K., and Ayyappan, S. (2010). Ornamental Fish Farming. Daya Publishing House.

Websites and eLearning Sources:

<https://www.fao.org/fishery/en/aquaculture>
<https://vikaspedia.in/agriculture/fisheries/ornamental-fish-culture>
<https://www.aquariumcoop.com/blogs/aquarium/keeping-fish>