CERTIFICATE COURSE

Dept. of Zoology

Sree Krishna College - Guruvayoor

Ornamental FISH FARMING

Applications are invited for the certificate course

Last Date of Registration
12.12.2024

Course Code : CERSKCZOO1/24

- **Course Objective :**
  - To improve knowledge ornamental fish, bait fish culture and aquatic ornamental plant propagation.
  - To understand the design, layout and construction of aquariums and fish hatcheries
- **Course Content :**
  - Acquiring knowledge about the basics of aquarium management (Theory and practical sessions)
  - Assessment
- **Course Duration :**
  - 30 Days

For Reg. Scan below

For further information Please contact

Dr. Santhosh P.P.
Head, Dept of Zoology,
Sree Krishna College, Guruvayoor

DEPARTMENT OF ZOOLOGY

Sree Krishna College, Ariyannur, Guruvayur 680102

Applications invited for the certificate course in Zoology

Prospectus:

***Course title*: ORNAMENTAL FISH FARMING**

***Course code*: CERSKCZOO3**

***Duration:* 30 days**

Course content	Types of activity	Hours engaged
Acquiring Knowledge	Theory	15
Applying theoretical/practical skills	Practical's	12
Assessment	Evaluation	3

Objective

- To impart knowledge on ornamental fish, bait fish culture and aquatic ornamental plant propagation.
- Develop the knowledge about the ornamental fish farming and techniques of breeding.

Last date of registration: 12/12/2024

Date of commencement of the course: 01/01/2025

For further information and details, please contact

Dr. Santhosh P.P
Head, Department of Zoology,
Sree Krishna College, Guruvayur

DEPARTMENT OF ZOOLOGY

Sree Krishna College, Ariyannur, Guruvayur 680102

Certificate course - 2024-25

CERTIFICATE COURSE ON ORNAMENTAL FISH FARMING

Course code: CERSKCZOO3/24

About the course:

The department of Zoology is offering a certificate course Aquarium fish and their maintenance to the students of the Sree Krishna college, Guruvayur. Ornamental fish production is an important component of the aquaculture industry. The ornamental fish trade is a foreign exchange earner, besides being a source of employment. It has a significant role in the economy of developed and developing countries. The entire ornamental fish industry including accessories and feed are estimated to be worth of more than 14 billion US $ (Thomas, 2008). Ornamental fish keeping has been serving as a viable recreation, especially for hobbyists from time immemorial. The ancient Romans were the first to keep ornamental fishes as pets at homes. The art of rearing the beautiful fishes by colour, design and shape spread rapidly throughout the world. With the growing interest on the fanciful varieties of brightly coloured organisms, ornamental fish culture developed as a tremendous business. In recent years, this hobby has spread all over the world. As a result, many countries in Asia and Europe started capturing and culturing the colourful, fanciful and the fascinating breeds of the fishes. More and more fishes from the marine, brackish and freshwater environments have been domesticated and popularized for business purposes

Ornamental fishes are the world's most popular pets and fish keeping happens to be a popular hobby next only to photography. The fantastic shapes and brilliant colours of ornamental fishes won the heart of millions of people; hence, they can be aptly called as "Living Jewels". With more than 120 countries involved in the ornamental fish trade and there are about 1,800 species of ornamental fish in the market of which over 1000 varieties are from freshwater

origin, 90 per cent of the fresh water fishes are farmed while 10 per cent are collected from wild

This course on ornamental aquarium fish and its maintenance deals with different aspects such as, construction of aquarium tanks, maintenance of aquarium, important ornamental fishes their breeding, ornamental aquatic plants, preparation of feed and feeding management, water quality management and disease management.

Course Objectives

- To impart knowledge on ornamental fish, bait fish culture and aquatic ornamental plant propagation.
- To understand the design, layout and construction of aquariums and fish hatcheries

Course Outcomes

- Identification of freshwater and marine water ornamental fishes.
- Understand the design, construction and maintaining aquariums in addition to water quality management.
- Explain the methods of handling, packing, transportation, marketing and export of aquarium fishes and regulations.
- Develop technical know-how for ornamental fish nutrition and disease management.

SYLLABUS

Unit I – Introduction to Ornamental fish keeping (7 Hrs)

World trade of ornamental fish and export potential. Different varieties of exotic and indigenous fishes. Principles of a balanced aquarium. History of fish keeping; Scope of Aquarium Fish Industry as a cottage industry. Types of aquaria (Salinity, Temperature, Species Selection & Location). Aquarium setup and accessories. Aquarium Filters and types of filtration methods (Mechanical, Chemical & Biological – Nitrogen Cycle); Precautions to be taken for an ideal aquarium; Criteria of selection for aquarium fishes.

Unit II – Setting up and maintenance of freshwater and marine aquarium (4 Hrs)

Fabrication, setting up and maintenance of freshwater and marine aquarium. Water quality management. Water filtration system-biological, mechanical, and chemical. Types of filters. Aquarium plants and their propagation methods. Lighting and aeration. Aquarium accessories and decorative.

Unit III- Breeding and rearing of ornamental fishes. Broodstock management (4 Hrs)

Aquarium fish feeds. Dry, wet, and live feeds. Breeding and rearing of ornamental fishes. Broodstock management. Application of genetics and biotechnology for producing quality strains. Management practices of ornamental fish farms. Common diseases and their control.

Conditioning, packing, transport, and quarantine methods. Trade regulations and wild life act in relation to ornamental fishes.

Unit IV- Practicals: (12 Hr)

Identification of common ornamental fishes and plants. Fabrication of all-glass aquarium. Setting up and maintenance of Aquarium accessories and equipment. Conditioning and packing of ornamental fishes. Preparation of feed. Setting up of breeding tank for live bearers, barbs, goldfish, tetras, chiclids, gouramis, fighters, and catfishes. Identification of ornamental fish diseases and prophylactic measures.

Assessment (3 Hrs)

Methods Of Evaluation:

Class attendance and assignments will be worth 25% of final grade

Written exams and the completion of all skill checklists will be worth 75% of final grade

>80 % =A grade; 70 – 79 % = B grade; 60 – 69 % = C grade; 50 – 59 % = D grade.

References

A.K. Mathur, L.L. Sharma, Sarvesh Mathur, 2006, Hand Book of Freshwater Ornamental Fishes Yash Pub house.

Amita Saxena, 2002, Aquarium management

Dey, V.K., 1993. Ornamental fishes. Marine Products Export Development Authority, Kochi. pp.7-10.

Dey, V.K., 2008. Global Trade in Ornamental Fish: Trends, Prospects and Issues. Abstract, International seminar on Ornamental fish breeding, farming and trade, Cochin, India. pp.2.

Dr. C.B.L. Srivastava Kitab Mahal, Aquarium- fish keeping, Kitab Mahal

J. Schmidt,2002, Aquarium plants, culture, & conservation

James C Cato; Christopher L Brown John Wiley & Sons, 2008, Marine ornamental species: collection, culture, & conservation

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Ramachandran. 2002, A Breeding, Farming and Management of Ornamental Fishes School of Industrial Fisheries, Cochin University of Science and Technology, Cochin. January

Thomas, K., 2008. Status of Ornamental fish trade in India with special reference to investment and trade opportunities. Abstract, International seminar on ornamental fish breeding, farming and trade, Cochin, India. pp.7.

Course Director: Dr. Santhosh P.P

Course Coordinator: Dr. Raji R