

FATIMA MATA NATIONAL COLLEGE

AUTONOMOUS

(Reaccredited with 'A' Grade by NAAC)

Affiliated to University of Kerala



1.3.2 FIRMAT Course

IQAC INTERNAL QUALITY ASSURANCE CELL



KNACK ENLIGHT

JOB ORIENTED SKILL COURSE

*Fisheries Integrated Resource Management in Aquaculture and Technology
(FIRMAT)*

SYLLABUS

Ice Breakers and Communication Skills

Basic factor relating – Shell Crackers, Defining yourself, Confidence Building, Grooming for interviews, official communication, Soft skills, Entrepreneurship development, Computer Advanced, Communicative English and Marketing strategies.

Module I :- Fisheries Resource Management

Definition of fisheries resource management; Resource of India; Reservoir fisheries and Estuarine fisheries; Marine capture fisheries; Fisheries and fishing methods in open water inshore fisheries and offshore fisheries. Fishery Bi products and scope.



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Module II :- Basic principles of Aquaculture

Scope and significance of aquaculture, Different aquaculture system, Aquaculture Global and Indian scenario; Types of aquaculture – Intensive, Semi Intensive and extensive – advantages and disadvantages, RAS, Monoculture, Polyculture, Integrated fish farming; sewage fed fish culture. Major culture systems – ponds, reservoirs, running water, cage and pen culture – water recirculation system, open sea farming.

Module III :- ORNAMENTAL FISHERIES

PART A :- SETTING UP OF AQUARIUM

Ornamental fish commercial aspects; Type of aquarium tanks – selection of materials, design and construction, ideal set up of an aquarium tank; plants and their role in aquaria – Marginal rooted submerged and floating, propagation, planting and artificial plants:-Types of substratum used in aquaria – sand, gravel, granite stone, marble chips, coral sand.



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Filter system and media – Chemical, mechanical and biological filter. Under gravel canister, trickle filter, bio filter, sponge filter, protein skimmer, ioniser. Filter media – sponge, gravel, charcoal, diatomaceous earth; Accessories – Nets feeding traps aerator, pumps, thermometers, lighting and heating equipments. Feeding of aquarium fishes – Live feed organisms and their culture, Artificial feeds and their formulation.

PART B :- FRESH WATER ORNAMENTAL FISHES

Rearing techniques of Guppies, Sword tails, Mollies, Barbs, Gold fish, Koi carp, Cichlids – Angel, Oscar, Tilapia; Anabantids – Gourami, Fighter fish; Catfish; Selection of inmates for an aquarium, method of releasing fishes; Routine maintenance of freshwater aquarium – Health and disease management. Culture of tropical ornamental fishes, pond culture, cements cisterns, Ornamental fish trade.



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Module IV :- Construction of Fish Farms

Site selection – Principles of site selection for various kinds of fish farms – Technical consideration, topography, soil texture, water supply and seed availability, non-technical consideration – socio – economic and legal aspects. Hatchery operation; Definition of farm technician and roles and responsibilities of Farm technician; Roles and responsibilities of QA/QC technician.

Module V :- HACCP Concept in Sea Food Industry

Introduction to HACCP programme and HACCP evaluation

Biological Hazards in Sea food

The seven Principles of HACCP

Good manufacturing practices

Good laboratory practices

Role of extension in the implementation

Value added production of fish

Ready to eat products



Job oriented skill course details

Fisheries Integrated Resource Management, Aquaculture and Technology (FIRMAT)

- ☛ **Supported and aided by the National Skill Development Corporation.**
- ☛ **Mission: Creation of employable skills among youth of Kerala**
- ☛ **Started in 2012**

- Eligibility** : Degree / Post Graduation students (Zoology and Botany)
- Duration of Course** : 60 Hours
- Job Placement** : 100% assistance for successful candidate
- Class timings:**

Option 1	During Regular college working hours	10am to 1pm 2pm to 4pm
Option 2	During weekends	9am to 1pm 2pm to 5pm
Option 3	During vacation	9am to 1pm 2pm to 5pm

- Training venue** : Own Institution or Nearest Skill Development Centre
- Course Pattern** : 55% Practical and 45% Theory
- Attendance Required** : 80% (Compulsory)
- Age Limit** : The applicant should be below the age of 40
- Gender** : No discrimination



Course Fees : INR 22000 for Indian Students

OR

USD 350 for Foreign Students

Important Note : Please refer Indian Students definition of Immigration rule

Fee concession : 100% fee concession for Physically Challenged
85% fee concession for SC, ST, OBC, OEC, BPL students.

2 (two) genuinely deserving APL students per batch*

SEBC students having less than 6 lakh family income

* Income below 6 lakh or deceased parent (either)

Documents Required : **Application Form**

Fee Payment Challan Receipt or Acknowledgement

Along with Copies of,

Aadhar Card and Student Identity card

Ration Card or Income Certificate

Caste Certificate or SSLC Certificate

And, four passport size color photograph