

DEPARTMENT OF ZOOLOGY

BARBHAG COLLEGE

KALAG: NALBARI: ASSAM

Add - On Course

FRESHWATER RESOURCE MANAGEMENT

Total Credit :- 2

Duration – 30 Hours

Total Marks – 50

Course Objectives :

The course is designed with the following objectives–

1. To develop fundamental knowledge about structure of Freshwater Ecosystem.
2. To develop knowledge on Freshwater Resources.
3. To develop knowledge on identification of different freshwater fish species.
4. To increase the knowledge on natural fish foods.
5. To acquire the knowledge on Physico-chemical characteristics of water for Pisciculture purpose.
6. To increase knowledge on fish diseases.
7. To acquire the knowledge on management of fish culture.

Learning Outcomes :


After the completion of course

1. Students acquire knowledge about structure of freshwater ecosystem.
2. Increase their knowledge on different natural fish foods.
3. They are able to identify different freshwater fish species.
4. They acquire the knowledge on freshwater fish culture and control of fish diseases.
5. They can establish a fish farm.

COURSE CONTENTS:-

UNIT:- 1. Structure and function of Freshwater Ecosystem.(Duration–6 Hours)

- Definition and types of Ecosystem.
- Components of Freshwater Ecosystem.
- Food chain and food web.
- Functions of Ecosystem.
- Ecosystem services.


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UNIT:-2.Freshwater Resources. (Duration-4 Hours)

- Freshwater Resources and its economic importance.
- Diversity of freshwater fishes of Assam.
- Brief classification of fishes.
- Identification of fish species.

UNIT:- 3. Natural Fish food and its maintenance (Duration-4 Hours)

- Fish food and different types of fish food.
- Natural fish foods.
- Artificial fish food.
- Culture of natural fish food.

UNIT:- 4. Monitoring of Physico-chemical characteristics of water for Pisciculture. (Duration-3 Hours)

- Brief description of Physico-chemical characteristics of water.
- Methods of estimation of different Physico-chemical characteristics of water.

UNIT:- 5. Fish Pathology (Duration-3 Hours)

- Fish diseases , causative agents, control measures.

PRACTICALS :-

1. Identification of Natural Fish Food. (Duration-2 Hours)
2. Identification of Fishes. (Duration-1 Hour)
3. Estimation of different Physico-chemical parameters of water relating to Pisciculture (P^H , DO, CO_2 , Hardness). (Duration-4 Hours)
4. Report writing on Freshwater Pond management. (Duration-3 Hours)

RECOMMENDED READINGS:-

BOOKS :

1. Chemical and Biological Methods for Water Pollution Studies.
R.K.Trivedy, P.K. Goel. Environmental Publications
2. A Hand Book of Water Plants. E. M. Bursche.
3. Fish Disease: Diagnosis and Treatment. Edward J. Noga .

ONLINE RESOURCES :

[Google Books ,https://books.google.com/books/about/Water_Reso...](https://books.google.com/books/about/Water_Reso...)

<https://ebooks.inflibnet.ac.in/esp01/>


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