

DEPARTMENT OF ZOOLOGY

COURSE CURRICULUM AND MARKING SCHEME

CERTIFICATE COURSE ON PISCICULTURE

Session 2022-23



**GOVT. V.Y.T. PG AUTONOMOUS COLLEGE,
DURG, 491001 (C.G.)**

(Former Name – Govt. Arts & Science College, Durg)

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CERTIFICATE COURSE IN PISCICULTURE



Govt. V.Y.T. PG Autonomous College, Durg (C.G.)

**Proposal for
Certificate Course**

on

Pisciculture

By

Department of Zoology

Govt. V.Y.T. PG Autonomous College Durg

Session 2022-23

INTRODUCTION TO THE PROGRAMME

Pisciculture is the process of rearing, breeding and harvesting of fish species in controlled aquatic environments like the sea water, lakes, rivers, ponds and streams. It serves different purposes, including food production, restoration of threatened and endangered species populations, The Aims of the Pisciculture is mainly the production of Fish for human food because of high nutritional value.

Scope of Pisciculture

- Increase Food Supply
- Provide aqua food which are rich in protein
- Provide employment Opportunity

The present programme aims to provide basic knowledge of pisciculture because it provides employability in local level. Scheme of certificate in pisciculture will be introduced for Session 2020-2021. This course is offered by the Govt. V.Y.T. PG Autonomous College, Durg (C.G.) in both English and Hindi. The syllabi and scheme of examination are detailed below:

Minimum Duration: 6 Months

Eligibility: 10+2 from any recognized secondary Education board of any state of India.

Medium of instruction

The Certificate in Aquaculture Programme is offered by Department of Zoology at, Govt. V.Y.T. PG Autonomous College, Durg (C.G.) in both Hindi and English medium. Likewise, students can also do their Project Work in either Hindi or in English.

Maximum Age: 25 years.

Minor component of the evaluation system

Assignments: -

Submission of assignments is compulsory. Assignments of a Course carry 30% weightage. Student will have to submit one assignment for each paper. Students will not be allowed to appear for the final examination for a CES, if they do not submit the assignment in time. If student do not get a passing mark in any assignments student have to submit it again.

Project - Every student has to do a Project which is carry 50 marks.

Major component of the evaluation system

Theory Paper: -

Theory paper carries 70% weightage in the final result.

In case, student fail to secure a pass score (40% marks) in the final examination, student will be eligible to reappear in the next year final examination for CAQ

Evaluation

Evaluation consists of two parts: 1) assignments, 2) project and 3) final Examination. In the final result, assignment of a CES carries 30% weightage, while 70% weightage is given to final examination, Following is the scheme of awarding divisions and grades:

Division	Percentage Range	Grade
First	80 and above	A - Excellent
First	60 to 79.99	B- Very Good
Second	50 to 59.99	C - Good
Pass	40 to 49.99	D - Satisfactory
Unsuccessful	Below 40	E - Unsatisfactory

Students are required to score at least 40% marks in assignments as well as final examination separately. In the overall computation also, you must get at least 40% marks in each paper to claim the Certificate in Aquaculture.

Re-evaluation: -

There is provision for re-evaluation of final exam (theory) answer copies (anyone or two).

The students can apply for re-evaluation of final exam (theory) answer copies against payment of Rs.250/- per theory paper.

1. There will be no ATKT.
2. Students will get two chances to within two years from the date of Admission.

EVALUATION PATTERN

Theory Paper		
Paper-I	Fish culture and Fish Farm Maintenance	100 Marks
Paper-II	Industrial Pisciculture and Fish Marketing	100 Marks

SYLLABUS AND MARKING SCHEME

Paper No.	Title of the Paper	Marks Allotted
		Theory
I	Fish culture and Fish Farm Maintenance	100
II	Industrial Pisciculture and Fish Marketing	100
III	Project	50
Total		250

Paper – I
Fish culture and Fish Farm Maintenance

Max. Marks:100

Min. Marks: 33

Unit - I

Fish culture: General Overview

- Definition and History of Fish culture
- Role of Fish culture in Economic development
- Types of Fish culture

Unit - II

Preparation and management of Fish farm

- Principle of site selection, Preparation of Fish farm
- Properties of soil in Fish farm
- Maintenance of Fish Farm

Unit - III

Water Quality of fish farm

- Physical, chemical and biological parameters of water
- Water management in fish farm
- Control of microflora and aquatic weed

Unit – IV

- Government Participation in Fish culture
- Central Government Participation (ICAR, CMFRI, CIFRI, CICIFRI, CIFA, CIBA, CIFT, NBFGR, NRCCWF etc.)
- Ministry of Agriculture, CIFNET, CICEF, Ministry of Food Processing IndustriesFSI (Fishery Survey of India)
- State Government Participation in Pisciculture

References:

1. A text book of Fishery Science & Indian Fisheries by Shrivastava, C.B.L. (2011) Kitab Mahal, Allahabad
2. A text book of Aquaculture, by Arumugam, N. (2010) Saras Publication Kanaya Kumari.
3. Environmental stress and fish diseases by Wedmeyer, Meyer Smith, Narendra Publishing House, New Delhi
4. Fishery and Inland Fisheries by C.B.L. Shrivastava.
5. Fish and Fisheries by Pandey and Shukla, Rastogi Publication, Meerut.
6. Fish and Fisheries by Jhingran, Hindustan Publishing House Co-operation, Delhi.
7. General and applied ichthyology (Fish and Fisheries) by S.K. Gupta, P.C. Gupta S. Chand & Co. Ram Nagar, New Delhi.

Paper -II
Industrial Pisciculture and Fish Marketing

Max. Marks:100

Min. Marks: 33

Unit -1

Types of Fish culture

- Sewage Fish culture,
- Integrated Fish culture
- Ornamental Fish culture
- Fish cum Poultry culture
- Paddy cum Fish culture

Unit -2

Fish Harvesting Techniques

- Conventional Methods: Introduction, Fishing Gears, Nets, Hook and line gear
- Un-Conventional Methods: Electro-Fishing, Light Fishing
- Fish Finding (Echosounder and sonar)

Unit -3

Marketing Management

- Harvesting and Stocking
- Preservation and processing
- Transport and Marketing

Unit – 4

Fish Pathology

- Inflammation
- Immune response
- Pathological Changes in Fish Tissues
- (Viral Diseases, Bacterial diseases, Fungal Diseases Protozoan, Helminthes
- Nutritional Deficiency diseases and their control)

References:

1. A text book of Fishery Science & Indian Fisheries C.B.L. Shrivastava.
2. A text book of fish biology and Indian Fisheries by Rahul P. Parihar, Central Publishing House, Allahabad.
3. An Introduction To Fishes by S.S. Khanna, Silver Line Publication Allahabad.
4. General and applied Ichthyology (Hishabd Fisheries) by S.K. Gupta, P.C.Gupta., S.Chada & Co. Ram Nagar, New Dehi.
5. A text book of Fish Biology and Indian Fisheries by Rahul P. Parihar, Central Publishing House, Allahabad

DEPARTMENT OF ZOOLOGY

The syllabus for Certificate Course on pisciculture is hereby approved for the Session 2022-23

Name and Signatures

Chairperson /H.O.D	Departmental members
University Nominee <i>[Signature]</i> 25/7/22	1. <i>[Signature]</i> 25/7/22
Subject Expert <i>[Signature]</i> R.P.	2. <i>[Signature]</i>
Subject Expert <i>[Signature]</i> 25/7/22	3. <i>[Signature]</i>
Representative from Industry/entrepreneur	4. <i>[Signature]</i>
Student representative	5.
Other Prof. from Science faculty	6.
	7.
	8.