

Anandibai Raorane Arts, Commerce and Science College, Vaibhavwadi
Department of Zoology

CERTIFICATE COURSE IN ESSENTIALS IN FISHERY SCIENCE (CCEFS) 2022-23

No. of the Activity	Zoo/2022-2023/06
Name of the Activity	Certificate course in essentials in fishery science (CCEFS)
Day and Date	2 nd January 2023 to 30 th April 2023
Time	As per the time table
Venue	Zoology Laboratory 1
Organized by	Department of Zoology
Co-ordinator/s	Dr. D. S. Korgaonkar
Activity for College/Class/Group	Class
No. of Participants	15
Nature: Academic/Co-curricular/Extra-curricular/Extension Activity	Co-curricular
Objectives of the Activity	<ul style="list-style-type: none"> ➤ To nurture interest of students in the subject of fishery. ➤ To create a skilled work force, this is capable of donning various roles in fisheries sector. ➤ To expose students to varied avenues having potential for self – employment. ➤ To provide basic reading material and establish sizeable share in the knowledge market.
Brief information of the Activity	Fisheries sector forms an integral part of Indian economy. This sector generates ample amount of jobs, revenue, food and foreign exchange. This course was an attempt to create both awareness and interest about fisheries among students.
Expected Outcomes	This course will make students aware about this fishery sector also may develop interest in fisheries so that students may choose related courses for their further studies. Students may also come up with research, related to fisheries as Sindhudurg district is coastal district.
Feedback Analysis	Students liked the Activity.
Supporting Documents	Notice, Registration list, Attendance sheet, Marksheet, Report.

Teacher in charge



Head of the Department

Notice

Date: 10/10/2022

All the students of SYBSc and TYBSc are informed that, certificate course in essentials in fishery science will be conducted by Department of Zoology in second term of this academic year. The course is scheduled from 02nd January, 2023 to 30th April, 2023. Interested students kindly register for the course. For more details, contact department of Zoology. Details will also be displayed on departmental (Zoology) notice board very soon.

Instructions for the Students:

- In this course, we will provide study material every day, you will have to read it and answer the MCQ test each day.
- You should submit the test on same day
- No previous tests will be given or shared on next day.
- Attendance for the course will be marked on submission of class test daily.
- There will be one field visit conducted.
- Final exam will be conducted after 10th April, 2023.

For details contact:

Dr. D. S. Korgaonkar – 9423187152

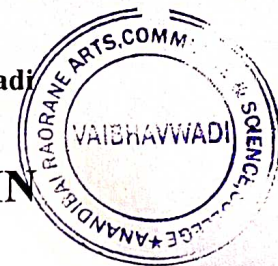
**Course Coordinator
(Dr. D. S. Korgaonkar)**



**Head of the Department
Mr. N. R. Hedulkar**

Maharana Pratapsinh Shikshan Sanstha's , Mumbai
Anandibai Raorane Arts, Commerce and Science College, Vaibhavwadi

Department of Zoology
CERTIFICATE COURSE IN ESSENTIALS IN
FISHERY SCIENCE (CCEFS)



Duration: 3 months

Hours: 45

Basic details:

Fisheries sector forms an integral part of Indian economy. This sector generates ample amount of jobs, revenue, food and foreign exchange. Without fisheries sector, India would lose some of its foreign exchange. Besides that, it will also result in unemployment of traditional fishermen and employees of the industries dependent on fish processing. In short, this sector is of great importance to the country.

The course deals with the fish processing, packaging, fish products, by- products, quality control etc. this course trains students in aspects related to post- harvest processes.

Objectives of the course:

- To nurture interest of students in the subject of fishery.
- To create a skilled work force, this is capable of donning various roles in fisheries sector.
- To expose students to varied avenues having potential for self – employment.
- To provide basic reading material and establish sizeable share in the knowledge market.

Unit I: Introduction to fishery

1.1 Introduction

1.2 Historical background and Scientific Foundations

1.3 About Indian fisheries

1.4 Fish Farming – Definition, Characters of cultivable fish, Categorization of fish by their habitat, Economic importance of fish, Fishery by-products.

Unit II: Introduction to Quality Control, fish Preservation and Processing

2.1 a) Determining quality and freshness – Organoleptic, Microbial and Chemical test for fish and prawns

b) Spoilage Mechanism - Hyperemia, Rigor mortis, Autolysis, Rancidity

2.2 Preservation and processing - a) i) Traditional methods of icing, drying, salting & their modifications.

ii) Introduction to refrigeration, types & properties of refrigerants, types of freezers – Brine, air blast, tunnel, contact plate & cryo-quick. Freezing procedures including Hygienic washing, dressing, PUD (Peeled & Undeveloped), DV (Deveined), packaging and freezing for fishes, prawns & their products.

iii) Principle & steps involved in can reform & canning of fish & prawns in various media.

Unit III: Fish as Food

- 3.1 a) Biochemical composition of raw fish & nutritional value of raw, preserved and Processed fish.
- 3.2 Fish by product: Fish protein concentrate, fish maws, ising glass, oils (body and liver), citosan, shark fin rays
- 3.3 Value added products: Fish/ Prawn pickle and chutney, fish wafers, surimi, imitation product, Fish soup powder, Fish /Crab steaks.



Unit IV: Entrepreneurship opportunities and status of research in marine science

- 4.1 Procuring Finance – a) Financial Institutions and Funding Agencies
b) Schemes and basic subsidies
c) Global marketing & Export-Import procedures.

4.2 Research Institutes: NIO, CMFRI, CIFE, FSI, CIBA, AND MPED

Unit V - Practical

- a) Estimation of fat/lipid from fish by Folch's Method & proteins by Lowry's Method.
b) Preparation of formulated feed for fish & prawn.
c) Preparation of surimi, fish protein concentrate, fish soup powder.
d) Preparations of fish burger, fish fingers, fish/prawn pickle.
e) Identification of packaging materials.
Waxed duplex carton, Master carton, Simple cans, Coated [Lacquered] cans, Polyolefin.

References:

- 1) A Textbook of Marine Ecology – Nair, N.B. & Thumphy, D.H., the Macmillan Book Company of India Ltd.
- 2) Ecological Methods for Field and Laboratory Investigations – P.Michael.
- 3) Course Material in Fishing Technology - Latha Shenoy, CIFE, Versova, Mumbai.
- 4) Financial Management – Prasanna Chandra, 7th Edition.
- 5) Financial Management – Khan & Jain .
- 6) Financial Management –I .M. Pandey .
- 7) Project Management - Prasanna Chandra.
- 8) Marketing Management – Philip Kotler
- 9) For additional and latest information on the topics, various websites can be visited.
- 10) Refrigeration by Arora
- 11) Text book of fish biology and Indian Fisheries by Dr. R.P. Parihar, Central Publication House, Allhabad.

A course designed by-

Department of Zoology
Anandibai Raorane Arts, Commerce and Science College, Vaibhavwadi.

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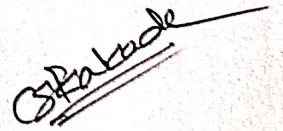
Department of Zoology

**List of students registered for the Certificate Course in Essentials in Fishery
Science 2022 -23**

Sr. No.	Name of the Student	Class
1	Sandesh Gajapkar	T.Y.B.Sc.
2	Sayali Kamble	T.Y.B.Sc.
3	Tanaji Sawant	T.Y.B.Sc.
4	Sneha Varadkar	T.Y.B.Sc.
5	Shailesh Teli	T.Y.B.Sc.
6	Ganpat Rane	T.Y.B.Sc.
7	Abhijeet Nikam	T.Y.B.Sc.
8	Gulamjilani Faras	T.Y.B.Sc.
9	Pallavi Shingade	S. Y. B. Sc.
10	Pranay Mane	S. Y. B. Sc.
11	Prajyot Gaikwad	S. Y. B. Sc.
12	Sanket Sutar	S. Y. B. Sc.
13	Ashvini Tawade	S. Y. B. Sc.
14	Pranali Sutar	S. Y. B. Sc.
15	Shridhar Sawant	S. Y. B. Sc.



Head



Principal

Anandibai Raorane Arts, Commerce
& Science College, Vaibhavwadi

Anandibai Raorane Arts, Commerce and Science College, Vaibhavwadi

Department of Zoology

**CERTIFICATE COURSE IN ESSENTIALS IN FISHERY
SCIENCE (CCEFS) 2022-23**

Time- Table

Academic Year – 2022-2023

Time	Day			
	Tuesday	Wednesday	Thursday	Friday
2.30pm to 3.30pm	NRH	DSK	DSK	DSK



Convener



Principal

PRINCIPAL
Anandibai Raorane Arts, Commerce
& Science College, Vaibhavwadi

DEPARTMENT OF ZOOLOGY
EXAM NOTICE

DATE: 05/04/2023

All the students registered for certificate course are hereby informed that, Exam for the Certificate course will be conducted on 24th April, 2023 in online mode due to the college exam schedules. The link for the same will be posted at 10.00 am on 24th April, 2023. The link will be open for 24 hours. The exam includes 40 MCQs 2 marks each. All questions are based on first 4 units each. Practical unit is not included in your theory exam. All have to submit report of Devgad Harbour visit till 29th April, 2023. It carries 20 marks.



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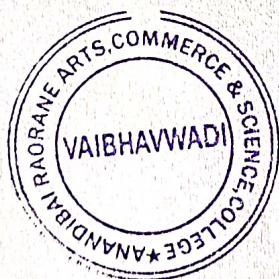
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Anandibai Raorane Arts, Commerce and Science College, Vaibhavwadi

Department of Zoology

**Exam Seat Number for Certificate Course in Essentials in Fishery Science
2022-2023**

Sr. no.	Name of the Student	Seat No.
1	Sandesh Gajapkar	CCEFS24
2	Sayali Kamble	CCEFS25
3	Tanaji Sawant	CCEFS26
4	Sneha Varadkar	CCEFS27
5	Shailesh Teli	CCEFS28
6	Ganpat Rane	CCEFS29
7	Abhijeet Nikam	CCEFS30
8	Gulamjilani Faras	CCEFS31
9	Pallavi Shingade	CCEFS32
10	Pranay Mane	CCEFS33
11	Prajyot Gaikwad	CCEFS34
12	Sanket Sutar	CCEFS35
13	Ashvini Tawade	CCEFS36
14	Pranali Sutar	CCEFS37
15	Shridhar Sawant	CCEFS38



Head of the Department

Anandibai Raorane Arts, Commerce and Science College, Vaibhavwadi

Department of Zoology

CERTIFICATE COURSE IN ESSENTIALS IN FISHERY

SCIENCE (CCEFS) 2022-23

Exam Attendance



Timestamp	Name of the Student	Exam seat No.
24/04/2023 10:45:05	Pallavi J Shingade	CCEFS32
24/04/2023 10:53:09	Tanaji Sawant	CCEFS26
24/04/2023 11:17:30	Pranay Mane	CCEFS33
24/04/2023 11:33:34	Sayali Babaji Kamble	CCEFS25
24/04/2023 11:48:50	Snehalata Varadkar	CCEFS27
24/04/2023 11:58:07	Sanket Vijay Sutar	CCEFS35
24/04/2023 12:13:55	Ashvini Tawade	CCEFS36
24/04/2023 12:14:35	Shridhar Sawant	CCEFS38
24/04/2023 12:24:02	Shailesh Teli	CCEFS28
24/04/2023 12:41:12	Sandesh Gajapkar	CCEFS24
24/04/2023 12:42:17	Ganpat Rane	CCEFS29
24/04/2023 12:55:14	Pranali Sutar	CCEFS37
24/04/2023 13:16:56	Abhijeet Nikam	CCEFS30
24/04/2023 13:33:31	Prajyot Gaikwad	CCEFS34
24/04/2023 13:35:57	Gulamjilani Faras	CCEFS31

Head of Department
Zoology

Anandibai Raorane Arts, Commerce and Science College, Vaibhavwadi

Department of Zoology

Final Result

Certificate Course in Essentials in Fishery Science 2022-2023

Sr. No.	Name of the Student	Marks Obtained (80)	Field Visit (20)	Total Marks Obtained (100)
1	Sandesh Gajapkar	76	15	91
2	Sayali Kamble	74	15	89
3	Tanaji Sawant	74	16	90
4	Sneha Varadkar	70	13	83
5	Shailesh Teli	68	14	82
6	Ganpat Rane	64	15	79
7	Abhijeet Nikam	66	14	80
8	Gulamjilani Faras	52	12	64
9	Pallavi Shingade	76	17	93
10	Pranay Mane	70	17	87
11	Prajyot Gaikwad	50	14	64
12	Sanket Sutar	74	19	93
13	Ashvini Tawade	72	18	90
14	Pranali Sutar	74	17	91
15	Shridhar Sawant	66	15	81



Head of the Department

Anandibai Raorane Arts, Commerce and Science College, Vaibhavwadi
Department of Zoology
Certificate Course in Essentials in Fishery Science 2022-2023
Report

Venue: Department of Zoology

Certificate course in Essentials in Fishery Science was conducted by Department of zoology of the college during the academic year 2022-2023. The period of the course was 02nd January, 2023 to 30 April, 2023.

Totally 15 students were admitted from SYBSc. And TYBSc. All students appeared for the online examination. 13 students secured A grade while 2 students passed with B grade in the course.

Students found the course useful, and some decided to obtain their higher degrees in fishery related subjects. Department is also satisfied as it was successful in creating awareness and liking for fishery sector among the students.



Teacher in Charge



Head of the Department



Principal
PRINCIPAL
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