



VEER NARMAD SOUTH GUJARAT UNIVERSITY



Department of Aquatic Biology

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Introduction

The Department of Aquatic Biology is the only University Department in Gujarat and second in India providing thorough grounding in biological aspects of aquatic environment to students and researcher specializing in basic studies in aquatic resources. The department functions as bridge between agencies/ industries and students for employment and career opportunities. University's cell and faculty members of the Department guides for training themselves for facing job interviews. In 2014-15 67% students got recruited through campus. Serving the society for more than two decades through research and skilled manpower, the Department of Aquatic Biology is moving ahead with new mission with following future plans:

- Exploring and utilizing potential aquatic resources
- Strengthening Department- Industries liaison
- Placement of students
- Establishment of Extension Education & Training Centre
- Revenue generation

Established : 1991 from Biosciences Dept.

Separate Dept. authorization: 1995

Extension of the Department : 2008



**Present HOD
Professor Dr. Kapila Manoj**



**Former HOD
Dr. Mohini Gadhia
(2006-2017)**



**Former HOD
Dr. Raghothaman
(1993-2006)**

Vision and Mission

The extensive vision of the Department is to improve the skills and knowledge by educating students in theoretical as well as practical knowledge. The department aims to develop manpower for serving the Society. The Mission of the Department of Aquatic Biology is to protect, conserve, and vitalize the local, regional, and national aquatic resources for human wealth and health through its various programs and activities

Thrust areas

Aquatic ecology, Hydrobiology and fish biology, Pollution & toxicology Aquaculture and Fish cytogenetics, planktonology and aquatic microbiology

Infrastructure and learning resources

Class rooms

Equipped Laboratories

PG Lab

Research Lab

Water testing Lab

Reading room

Computer room

Seminar hall

Aquarium room

Ladies room

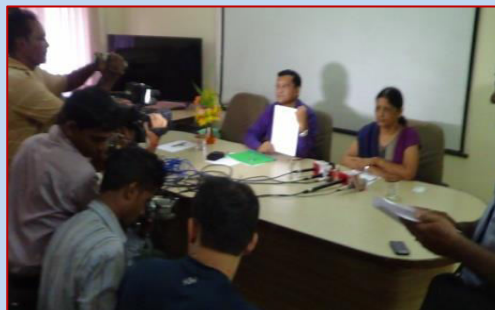
Museum



Potency of the Department

- **Testing laboratory (Source of revenue generation)**

The Department of Aquatic Biology has developed a testing laboratory accredited by NABL for the measurement of radioactivity in packaged drinking water. VNSGU is the first University in Gujarat and second in India for this innovative accreditation.



Training

The Department of Aquatic Biology has been rigorously working for the skill and personality development of the students. They are exposed to practical and technical environments through their placement and training. Two trainings sponsored by MPEDA (Marine Product Export Development Board) and NFDB (National Fisheries Development Board) were organized by the Department for M.Sc. students. MPEDA training is mandatory to start shrimp farming. NFDB-sponsored training at Udaipur was focused on self-employment in the area of aquarium management. Training on Ornamentpreneurship was also organized for the skill development of the students in the field of ornamental fisheries.

Career opportunities

Central and State Government Fisheries Department

Educational institutes

University and colleges relevant to the availability of subject requirement

Research institutes / Laboratories

Extension Educational institutes: KVK / KGK

NGOs

Self-Employment

Fish farming
Farming input Supplier
Seed producer
Fish / Prawn producer

Aqua-industries

Farms
Processing plants
Feed industries etc.

Curricular aspects

- The curriculum of Aquatic Biology has been carefully designed to develop skilled and technical post-graduates.
- It is in line with the guidelines of the regulatory authorities of the University Curriculum Development Committee and UGC.
- The Department promotes interdisciplinary programs which develop knowledge in various related fields of Aquatic Biology.
- Development of communication and writing skills through seminars and report writing.

Programs / Courses

Programme / Course		Commencement Date	Duration
1	M.Sc.	1993-2010 2010 onwards	Two years Four semesters
2	M.Phil.	1993-2018	Discontinued
3	Ph.D.	1993	Minimum three years research and one semester course work(Theory)

Scope of the Course

- ❖ To exploit the potential in Freshwater Aquaculture, Marine water and Brackish water Aquaculture with utilization of the aquatic resources

- ❖ Job opportunities in industries, research institutes and Aquaculture industries for self-employment
- ❖ Pursuing research careers in related fields

FRAMEWORK OF M. Sc. COURSE IN AQUATIC BIOLOGY

M. Sc. Sem I						
Theory Paper /Practical	Teaching schedule Hrs /week	Exam Schedule			Total marks	Credit
		Duration (Hrs)	Internal marks	External marks		
Theory papers :						
Core papers						
AQB 101: Aquatic resources and their management	04	03	30	70	100	04
AQB 102: Aquatic Pollution and Toxicology	04	03	30	70	100	04
AQB 103: Fish physiology and Endocrinology	04	03	30	70	100	04
Elective Paper						
AQB 104 A: Instrumentation AQB:104 B: Computer Application	04	03	30	70	100	04
Practicals :						
AQB 105: Water & Sediment analysis and Fish physiology	12	12	45	105	150	06
Skill-based elective paper						
AQB 106: Aquarium management for employment or Swayam/ Mooc / Other Courses (Course can be taken from any faculty)	02	02	15	35	50	02
Total	30	26	180	420	600	24

M. Sc. Sem II						
Theory Paper /Practical	Teaching schedule Hrs /week	Exam Schedule			Total marks	Credit
		Duration (Hrs)	Internal marks	External marks		
Theory papers :						
Core papers						
AQB 201: Fisheries Technology	04	03	30	70	100	04

AQB 202: Fish Nutrition and feed Technology	04	03	30	70	100	04
AQB 203: Fish Genetics and Biotechnology	04	03	30	70	100	04
Elective Paper						
AQB 204 A: Fisheries legislation AQB 204 B: Biostatistical Analysis	04	03	30	70	100	04
Practicals :						
AQB 205: Fisheries Technology and Biostatistics	12	12	45	105	150	06
Skill-based elective paper						
AQB 206: Fish Products and By-products technology or Swayam/ Mooc / Other Courses (Course can be taken from any faculty)	02	02	15	35	50	02
Total	30	26	180	420	600	24
M. Sc. Sem III						
Theory Paper /Practical	Teaching schedule Hrs /week	Exam Schedule			Total marks	Credit
		Duration (Hrs)	Internal marks	External marks		
Theory papers :						
Core papers						
AQB 301: Aquatic Microbiology & Disease Management	04	03	30	70	100	04
AQB 302: Aquaculture Practices	04	03	30	70	100	04
AQB 303: Planktonology	04	03	30	70	100	04
Elective Papers						
AQB 304 A: Fisheries Extension Education AQB 304 B: Research methodology and Writing skill	04	03	30	70	100	04
Practicals :						
AQB 305: Aquaculture management and Extension Education	12	12	50	100	150	06
Skill based elective papers						
AQB 306: Entrepreneurship development in Fisheries Swayam/ Mooc/ Other Courses (Course can be taken from any faculty)	02	02	15	35	50	02

Total	30	26	180	420	600	24
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M. Sc. Sem IV

Papers	Exam Schedule		Total marks	Credit
	Internal marks	External marks		
AQB 401: Dissertation	100	250	350	14
AQB 402: Seminar (Seminar topic related to dissertation research title/ background)	25	75	100	4
AQB 403: Licensing and certification of Aquaculture practices	25	50	75	3
AQB 404: Educational tour/Project submission/ Field visit	25	50	75	3
Total	175	425	600	24

Licenses and Certificates: (BAP, CAA, SIP, EU, ASC, MPEDA etc.)

Course content for Ph.D

Theory

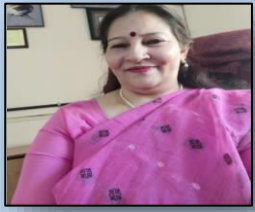
AQB 1001: Research Methodology & Instrumentation

AQB 1002: Advances in Fishery science

AQB 1003: Aquatic Pollution

Research work minimum for 3 years as per the University guidelines

Teaching/Research Faculty

Name	Designation	Qualification	Expertise/research
 Dr. Kapila Manoj	Professor and Head	M.Sc., Ph.D	❖ Toxicology ❖ Water Pollution ❖ Benthology ❖ Planktonology ❖ Fishery biology ❖ phytoplankton culture ❖ Feed technology
	Professor	M.Sc. Ph.D. (FRM) NET (ICAR)	❖ Fish Biology ❖ Aquaculture ❖ Limnology ❖ Fishery Extension

Dr.N.C.Ujjainia			
 Dr.Niharika Shah	Assistant professor (Ad hoc)	M.Sc. Ph.D.	❖ Fish marketing ❖ Microbiology ❖ Haematology
 Dr.Ranjana Bengani	Assistant professor (Ad hoc)	M.Sc. Ph.D.(JRF,UGC) NET(UGC)	❖ Aquatic Pollution ❖ Environmental Science ❖ Microbiology
 Dr. Nandita Soni Deshpande	Assistant professor (Ad hoc)	M.Sc. Ph.D. NET(ICAR)	❖ Fish Biology ❖ Aquaculture ❖ Limnology ❖ Aquatic Toxicology. ❖ Water and soil pollution

Administrative staffs

Ms. Amisha Gamit (Clerk)

Ms. Neha Bhatt(Lab Asst.)

Ms. Binal Pandya

(Lab. Technician)

Mr. Rahul Patel(Peon)

Mr. Vajesingh Rathod (Peon)

Mr.Laljibhai Patel(Peon)

List of Research Degree Awardees

Sr. No.	Name of the Research Scholar	Name of Supervisor	Year
M.Phil.			
1	Mr. Manish Chauhan Mohanlal	Dr. Kapila Manoj	2003
2	Ms.Dange Suchita Pratapbhai	Dr. Kapila Manoj	2010
Ph.D.			
1	Mr. Jain Atulkumar	Dr. Mohini Gadhia	2000
2	Mr. Jaiswal A.G.	Dr. G.Ragothaman	2001
3	Mr. Naik Hemal kumar K.	Dr. G.Ragothaman	2002
4	Ms. Kullar Priti	Dr. G.Ragothaman	2002
5	Ms. Choksi Dipti Babubhai	Dr. Mohini Gadhia	2003
6	Mr. Changala Bhaskar Rao	Dr. G.Ragothaman	2003
7	Ms. Patel Shilpa P.	Dr. G.Ragothaman	2003
8	Ms. Patel Saroj Manilal	Dr. G.Ragothaman	2003
9	Mr. Gogari Pankaj	Dr. G.Ragothaman	2005
10	Mr. Chauhan Manish Mohanlal	Dr. Kapila Manoj	2006
11	Ms. Vaidya Krishna Ashokbhai	Dr. Mohini Gadhia	2008
12	Mr. Wadher Kailash	Dr. Kapila Manoj	2009
13	Ms. Chaudhri Usha Hemant	Dr. Kapila Manoj	2009
14	Mr. Gandhi Dharmesh	Dr.Mohini Gadhia	2011
15	Mr. Tandel Riteshkumar Jayrambhai	Dr. Mohini Gadhia	2011
16	Ms. Shingala Divya M.	Dr. Kapila Manoj	2011
17	Ms. Asha Bajpai	Dr. Kapila Manoj	2011
18	Ms. Solanki Maheswari S.	Dr. Kapila Manoj	2011
19	Mr. Jha Mukesh kumar	Dr. Mohini Gadhia	2012
20	Ms. Talsania Niharika Girishbhai	Dr. Mohini Gadhia	2014
21	Mr. Joshi Chetan P.	Dr. Mohini Gadhia	2014
22	Mr. Prajapati Rakesh C.	Dr. Mohini Gadhia	2015
23	Mr. Ekhalak Ansari Nurul Haque	Dr. Mohini Gadhia	2015
24	Ms. Surana Ranjana	Dr. Mohini Gadhia	2015
25	Ms. Dange Suchita Pratapbhai	Dr .Kapila Manoj	2016
26	Ms. Dubey Monika	Dr.N.C.Ujjania	2016
27	Mr.Shety Uday Sankar	Dr. Mohini Gadhia	2017
28	Ms. Sharma Vidya Manoj	Dr. Mohini Gadhia	2017
29	Ms.Varsani Alpa V.	Dr. Kapila Manoj	2017
30	Ms. Sangani Kinjal	Dr. Kapila Manoj	2018
31	Ms. Nandita Soni	Dr.N.C.Ujjania	2018
32	Ms.Patel Khushboo T.	Dr. Kapila Manoj	2020
33	Ms.Sarang Taruni R.	Dr. Kapila Manoj	2020
34	Ms.Patel Monali	Dr. Kapila Manoj	2021
35	Mr. Prajapati Shrey	Dr.N.C.Ujjania	2023

36	Ms Vikranti Patel	Dr. Kapila Manoj	2024
37	Mr. Chaudhari Ankit	Dr. Kapila Manoj	2024

Glimpse of the Department



Student's presentation



Alumni Meet



Tapi cleaning



Routine Practical's



Excursion



Research activities