TAMIL NADU Dr.J.JAYALALITHAA FISHERIES UNIVERSITY

SELF-STUDY REPORT FOR COLLEGE AND PROGRAMMES



FISHERIES COLLEGE AND RESEARCH INSTITUTE
THOOTHUKUDI – 628 008
TAMIL NADU

2021

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TAMIL NADU Dr. J JAYALALITHAA FISHERIES UNIVERSITY

SELF STUDY REPORT FOR COLLEGE

Submitted by

Fisheries College and Research Institute,
Thoothukudi – 628 008
Tamil Nadu

6.5. Self-Study Report for the College:

The Colleges offering degree programmes as per recommendations of Deans' Committees/ VCI/ BSMA are eligible for ICAR accreditation. As per the format, the SSR of the Colleges is given below:

The Fisheries College was started at Thoothukudi by the Tamil Nadu Agricultural University (TNAU) in October, 1977 as the second fisheries college in India to offer BFSc degree programme. It was brought under the Tamil Nadu Veterinary and Animal Sciences University (TANUVAS) on 19thSeptember, 1989. The college was renamed as Fisheries College and Research Institute (FC&RI) in 1990 to focus more on research and extension activities. Currently, the FC&RI has three campuses: the Main Campus located at Harbour bypass road having an area of 24 ha, staff quarters at the Teachers Colony with an area of 1 ha, which is 3 km away from main campus and Mariculture Research Farm Facility (MRFF), Tharuvaikulam with an area of 6 acres at Tharuvaikulam, a coastal village 17 km away from the main campus, for undertaking Mariculture / Coastal Aquaculture activities.



Fisheries College & Research Institute Thoothukudi

Objectives of FC&RI:

- To develop technical and professional manpower for fisheries sector/
- To impart educational programmes such as B.F.Sc., M.F.Sc., Ph.D. and Certificate courses.
- To undertake basic and applied research for the benefit of people in various sectors / areas of fisheries.
- To disseminate the research innovations through various extension programmes

6.5.1. College Administration

6.5.1.1. College Dean's Office Establishment:

The Dean post has been sanctioned by the appropriate authority as per ICAR Model Act/UGC guidelines. Date of selection of present Dean, mode of selection, tenure, etc., are mentioned below. The staff and infrastructure/ facilities available in the Dean's office are also provided below.

Date of selection of the present Dean – 26.11.2019

Mode of Selection

For the appointment of Dean, application are called for from eligible candidates in the Daily Newspaper and in the university website. The applications received are scrutinized by a committee constituted by the University and the short listed candidates are interviewed by a committee including Vice Chancellor, Principal Secretary to the Government (Fisheries), Government nominee and external experts. The eligible candidate shall be appointed as the Dean of the College.

Tenure of the Dean – 3 years

Deans Office Staff details:

Sl. No.	Name of the post	Sanctioned strength	In Position	Vacant
I.	**Dean's Office (14-101)**			
1.	Administrative Officer	1	1	-
2.	Asst. Accounts Officer	1	1	-
3.	Superintendent	2	2	-
4.	Asst. Public Relation Officer	1	1	-
5.	Assistant (Non-Sec.)	6	5	1
6.	Assistant (Sec.)	1	1	-
7.	Jr. Assistant (Sec.)	1	1	-
8.	Jr. Assistant (Non-Sec.)	3	1	2
9.	Steno- Typist Gr. II	1	1	-
10.	Typist	1	1	-
11.	Attender	1	1	-
12.	Office Assistant	1	1	-
13.	Marker	1	1	-
14.	Sweeper	2	2	-
15.	Gardener	1	1	-
	Total	**24**	**21**	**3**

Infrastructure facilities available in Deans Office:

i. Dean's Chamber
ii. Steno room
iii. Conference Hall
iv. Dean's Office
v. Education Technology Cell (ETC)
vi. Video Conferencing Hall
vii. Examination hall
viii. UG and PG classrooms

6.5.1.2. Monitoring Mechanism for Quality Education (on-line):

The college has internal quality assurance system which includes conduct of examinations, counselling and the Education Technology Cell to meet the diverse needs of the stakeholders. The students are involved in all research and extension activities and the students receive awards and prizes for research, extension and extracurricular activities from all over India.

6.5.1.3. CC/Board of Studies:

The Board of Studies (Fisheries) is conducted by the Faculty Dean (Fisheries) of the University with the following members.

- Dean of the Faculty – as Chairman of the Board of Studies
- Other Deans within the University
- All Directors of the University
- Controller of Examination
- Heads of the Departments of the concerned faculty
- Six elected representatives of two each from Professors, Associate Professors and Assistant Professors of the Faculty and
- Two experts in the concerned subject from outside the University to be nominated by the Vice-Chancellor

The term of office of the elected members and the experts outside the University shall be for three years with provision for another term.

The duty of the Board of Studies includes:

- To propose to the Academic Council, the courses of study for the various programmes of instructions offered in respective Faculty of the University.

- To propose to the Academic Council, the curricula of the University and advise the Academic Council in regard to all questions referred to it regarding the syllabi for various Under Graduate, Post Graduate and Diploma programmes and all other functions referred to it by the Academic Council.
- To recommend to the Academic Council the establishment of new Departments, abolition / sub-division / or otherwise reconstitution of existing Departments and

- To exercise such other powers and to perform such other duties as directed by the Academic Council.

- The Board of Studies meets at least twice a year or as and when necessary at the discretion of the Chairman.

Date of conduct of Board of Studies (BOS) meetings for last five years and major recommendations:

Date of Conduct of BOS meetings	Recommendation made
II BOS 18.09.2015	• Addition of a course on Fish immunology (1+1) for B.F.Sc. • Modifications in B.F.Sc. Curriculum in the courses offered in Department of Aquaculture, Fish Processing Technology and Fisheries Extension. • Provision of separate seats for state department and Industry sponsored candidates in M.F.Sc. and Ph.D., programmes. • To increase the period of study for part time Ph.D., students.
III BOS 08.07.2016	• To fix the percentage for entry of the other state Fisheries College students in PG programmes of TNJFU. • The Department of Aquaculture, FC&RI, Ponneri to offer M.F.Sc and Ph.D., degree programmes. • To enable the MFSc and Ph.D. students to work in Research Projects funded by Industries/External funding agencies from 1st year onwards simultaneously along with course work. • Adopting the new Syllabus as per ICAR 5thDean's committee recommendations for the B.F.Sc degree programme from this academic year (2016-17). • Reorganizing the available staff in seven Departments suggested as per the 5thDeans' committee recommendations at FC & RI, Ponneri.
IV BOS	• Synopsis approval for MFSc and Ph.D., students – Guidelines,

06.03.2017	• To start M.F.Sc., programme in the Department of Aquatic Animal Health Management, Department of Aquatic Environment Management, Fish Processing Technology FC&RI, Ponneri.
V BOS 22.9.2017	• Semester-wise re-distribution of courses for B.F.Sc. • Rearrangement of syllabus / course contents for B.F.Sc. • Rearrangement of courses offered by the Department of Fisheries Biology and Resource Management in different semesters. • To complete the Students Research Guidance Workshop (SRGW) during middle of the II semester for PG students. • Fish Nutrition related UG course from Dept. of Aquaculture to newly created Department of Fish Nutrition & Feed Technology • To reschedule STUDENTS READY PROGRAMME (SRP).
VI BOS 02.02.2018	• To raise the limit for Chairmanship of advisory committees. • To start new M.F.Sc. programme in the Department of Fish Nutrition and Feed Technology. • To revise the period for submission of Thesis Synopsis. • To increase the number of credit load offered per semester.
VII BOS 06.07.2018	• To fix the time limit for completion of B.F.Sc degree • To develop evaluation criteria for the proposed Students Ready Programme (0+20) offered during 7th and 8th semesters. • To consider courses only from ICAR approved PG programmes as minor course for all the departments. • To evaluate research credits of PG programmes through online video conference mode by the members of advisory committees working outside the college/institutes. • To evaluate research credits of PG programmes through online video conference mode by the members of advisory committees working outside the college/institutes. • To introduce public viva voce for Ph.D., students to defend the thesis • To introduce pre-thesis submission seminar for postgraduate students.
VIII BOS 20.07.2019	• To start a new Ph.D., Programme in Fish Nutrition and Feed Technology. • To start a new B.Voc. Degree Programme in Aquatic Animal Health Management by the State Referral Lab for Aquatic Animal Health, TNJFU Madhavaram campus. • To start B.F.Sc., degree programme on Self Finance Mode at Kanyakumari District/
IX BOS	• To waive the mandatory requirement of minimum of one

09.10.2020	publication in a peer reviewed journal with NAAS rating above 6 before the conduct of the viva-voce examination for M.F.Sc Students. • To postpone All India Study Tour of final year B.F.Sc Students to VIII Semester.
X BOS 04.03.2021	• The modalities for Pre-thesis submission Seminar was finalised. A Committee has been constituted with the Faculty Dean (Fisheries) as Chairman and Campus Dean, Heads of the Department of the campus and advisory committee members of the respective student as members. The seminar will be conducted after the 80th working day of the first semester. • The mandatory stay requirement of PG students for two weeks at the Centres/ Units of the University was dropped. • To modify the existing eligibility norms for Ph.D., admission with modifications in terms of identifying relevant/concerned department which is eligible for Ph.D., admission in individual department. • To reduce the minimum score requirement for service candidates of Tamil Nadu Fisheries Department in entrance examination for MFSc/Ph.D., admission. The minimum score requirement for service candidates of Tamil Nadu Fisheries Department is reduced as 10 percent lesser than regular candidates in accordance with the existing communal reservations for MFSc/Ph.D., admission in the University. • To consider the evaluation of semester final theory answer scripts of UG, MFSc & Ph.D.as per 5th Deans Committee by the internal experts of TNJFU at the Head Quarters, Nagapattinam (By faculty staff other than the course teacher). • A criteria for revaluation/ retotalling for regular and arrear examinations marks for students was finalised.

6.5.1.4. Anti-Ragging Cell:

In pursuance to the Judgment of the Hon'ble Supreme Court of India dated 08.05.2009 in Civil Appeal No. 887/2009, the University Grants Commission has framed "UGC Regulations on curbing the menace of ragging in higher educational institutions, 2009" which have been notified on 4thJuly, 2009 in the Gazette of India. The College follow this regulation and subsequent guidelines issued in the matter in letter and spirit. The details are given below.

An anti-ragging committee is constituted by the Institute with diverse mix of members from various fields namely the Superintendent of Police, Tahsildar, Press, Parents and student's representative form all batches of BFSc, MFSc and Ph.D., programme. The committee meets frequently and discuss on the measures taken to prevent ragging and untoward incidents related to ragging, if any.

- An anti-ragging squad is constituted under the Chairmanship of the Warden and the members (Teaching staff of the College) are assigned duty to prevent ragging at both the hostels (boys and girls) during college and out of office hours.
- The staff visit the hostel everyday (night hours) and monitor the activities of the students and submit a report to the Chairman of anti-ragging committee. The Chairman in turn submit a daily report based on the reports submitted by the reporting staff stating that no untoward incident has occurred related to ragging of fresh students.
- A vehicle is put on service to facilitate faculty members to make surprise visits.
- An undertaking by parents and students of senior batch students stating that they will not indulge themselves in ragging of junior students is obtained.
- CCTV cameras have been fixed in sensitive places like Library, Canteen, Examination Hall, Class rooms, Hostel premises, etc.
- Freshers are informed to lodge complaints / grievance in the complaint box located in the Deans office.
- Banners and hoardings depicting the penal provision against erring students are placed in the campus. The National Anti-ragging help line toll free number (1800-180-5522), website address and phone numbers of anti-ragging committee members are clearly indicated on all banners.
- The senior students are sensitized on the ill effects of ragging and suitable instructions are issued to all senior students through the concerned Students Coordinators.

6.5.1.5. Biological waste disposal facility:

Wastes (chemical, biological, radioactive, universal, and recyclable) are generated by a variety of research, services, maintenance, etc., and cleaning operations are undertaken in College. The details of waste disposal facilities are provided below.

The college has a committee with a Chairman and members to look into the cleanliness and waste disposal of the campus. The waste generated in the departments are segregated into biodegradable and non-biodegradable waste.

The following Departments of our college generate chemical and biological waste, Department of Fish Pathology and Health Management, Department of Aquatic Environment Management, Department of Fish Processing Technology and Department of Fish Quality Assurance and Management. The treatment of chemical, biological waste and recyclable waste is given below.

Chemical waste – Acid or alkali is neutralized and buried into deep pits.

Biological waste – Microbial pathogen from agar plates is killed in autoclave and discarded in pits - Biological sample is incinerated and buried.

Radioactive waste – Not applicable

Universal and Recyclable waste

Papers / Cartons– Collected and sold for recycling

Plastics – Supplied to vendors for recycling

Glass / broken glass ware – Supplied to vendors for recycling

Biodegradable waste - supplied to corporation

6.5.1.6. Institutional Ethics Committee for Experiment on Animals:

As on date no such committee is available in FC&RI, Thoothukudi. However, research is undertaken with the approval of the University. The research proposals of the students are approved by the Chairman of the advisory committee and by Faculty Dean (Fisheries).

6.5.1.7. Committee for Prevention of Sexual Harassment of Women at Work Places:

The institution is adhering the sexual harassment of women at workplace (Prevention, Prohibition and Redressal Act, 2013) in letter and spirit. The details are given below.

The University has a Vishaka committee which is headed by a facility in the cadre of Professor and Head with four members.

The functions of the Vishaka committee at Fisheries College and Research Institute, Thoothukudi is:

- Provide a safe working environment.
- Display conspicuously at the workplace, the penal consequences of indulging in acts that may constitute sexual harassment and the composition of the Internal Complaints Committee.
- Organise workshops and awareness programmes at regular intervals for sensitizing employees on the issues and implications of workplace sexual harassment.
- Treat sexual harassment as a misconduct under the service rules and initiate action for misconduct.
- Prevent discrimination and sexual harassment against women by promoting gender amity among students and employees.
- The Committee deals with issues relating to sexual harassment at Fisheries College and Research Institute. A complaint of discrimination or sexual harassment may be lodged by the victim or a third party. A written complaint may be addressed to the Chairman of the Committee. If the complaint is made to any of the Committee members, they may forward it to the Chairman of the Committee against Sexual Harassment.

6.5.2. Faculty

6.5.2.1. Faculty Strength:

Mentioned below the faculty position (both in sanctioned and in-position) at the College.

Sl. No	Name of the Sanctioned Post	Sanctioned Strength	Position	Vacant
I	**Dean's Office (14- 101)**			
1.	Dean	1	1	0
2.	Asst. Librarian	1	1	0

3.	Asst. Director of Physical Education	1	1	0
	Total	**3**	**3**	**0**
II.	**Dept. of Fisheries Biology and Resource Management (14-102)**			
1.	Assoc. Prof.	1	0	1
2.	Asst. Prof.	3	2	1
	Total	**4**	**2**	**2**
III.	**Dept. of Aquatic Environment Management (14-103)**			
1.	Assoc. Prof.	1	1	0
2.	Asst. Prof.	3	3	0
	Total	**4**	**4**	**0**
IV.	**Dept. of Aquaculture (14-104)**			
1.	Asst. Prof	4	4	0
	Total	**4**	**4**	**0**
V.	**Department of Fish Pathology and Health Management (14-106)**			
1.	Professor	1	1	0
2.	Assoc. Prof.	1	0	1
3.	Asst. Prof.	2	2	0
	Total	**4**	**3**	**1**
VI	**Dept. of Fishing Technology and Fisheries Engineering (14 -108)**			
1.	Assoc. Prof.	1	0	1
2.	Asst. Prof.	2	2	0
	Total	**3**	**2**	**1**
VII	**Dept. of Fish Processing Technology (14-109)**			
1.	Professor	1	0	1
2.	Assoc. Prof.	1	0	1
3.	Asst. Prof.	3	3	0
	Total	**5**	**3**	**2**
VIII	**Dept. of Fish Quality Assurance and Management (14-110)**			
1.	Professor	1	1	0
2.	Assoc. Prof.	2	0	2
3.	Asst. Prof.	3	3	0
	Total	**6**	**4**	**2**
IX	**Dept. of Fisheries Extension, Economics and Statistics (14-125)**			
1.	Professor	1	1	0
2.	Associate Prof.	1	0	1
3.	Asst. Prof.	7	2	5
	Total	**9**	**3**	**6**
	Grand Total	**42**	**28**	**14**

6.5.2.2. Faculty Profile (department wise):

The faculty profile in department wise is given in tabular form in **Annexure –I**

6.5.2.3. Credentials of the Faculty:

The institution has employed competent faculty members qualified to accomplish the mission and goals of the institution. The highest qualification received by each faculty, related work experiences in the field, professional licensure and certifications, honours and awards, continuous documented excellence in teaching, or other demonstrated competencies and achievements that contribute to effective teaching and student learning outcomes are given in the **Annexure –I**.

6.5.2.4 Technical and Supporting Staff :

The College has appointed (in place) sufficient technical/laboratory/farm staff to cater the need of practical and field experiments. The department wise distribution of technical, supporting and field staff are given in the tabular form below.

Department of Fisheries Biology and Resource Management (14-102)

Sl.No.	Name of the post	Sanctioned strength	In position	Vacant
1.	Typist	1	1	0
2.	Attendant	1	1	0
3.	Sub-Inspector of Fisheries	1	1	0
4.	Museum Curator	1	1	-
	Total	**4**	**4**	**0**

Department of Aquatic Environment Management (14-103)

Sl.No.	Name of the post	Sanctioned strength	In position	Vacant
1.	Junior Asst.(Non-Sec)	1	0	1
2.	Attender	2	2	0
	Total	**3**	**2**	**1**

Department of Aquaculture (14 -104)

Sl.No.	Name of the post	Sanctioned strength	In Position	Vacant
1.	Computer Operator	1	1	0
2.	Typist	1	1	0
3.	Attender	3	3	0
4.	Office Assistant	1	1	0
5.	Time Scale Mazdoor	4	4	0
6.	Sub-Inspector of Fisheries	1	1	0
7.	Fishery Assistant	2	2	0

8.	Agrl. Supervisor(Re-designated as Farm Manager)	1	1	0
9.	Fisherman	2	2	0
	Total	**16**	**16**	**0**
Th.K.Murugan, Attender, IPGS, Vaniyanchavadi (working arrangement in the Dept. of Aquaculture)				

Department of Fish Pathology and Health Management (14-106)

Sl.No.	Name of the post	Sanctioned strength	In Position	Vacant
1.	Assistant (Non-Sec.)	1	1	0
2.	Jr. Assistant (Non-Sec.)	1	1	0
3.	Office Assistant	1	1	0
4.	Watchman	1	1	0
5.	Lab. Technician (Re-designated as Technician)	1	1	0
6.	Lab. Attendant	1	1	0
	Total	**6**	**6**	**0**

Department of Fishing Technology and Fisheries Engineering (14-108)

Sl.No.	Name of the post	Sanctioned strength	In Position	Vacant
1.	Typist	1	1	0
2.	Asst. Engineer (Mech.)	1	0	1
3.	Skipper	1	0	1
4.	Bosun	1	1	0
5.	Mechanical Gr. II	1	1	0
6.	Deck Hand	2	2	0
7.	Seaman	1	1	0
8.	Electrical Foreman (Engine Driver converted as Electrical Foreman)	1	1	0
9.	Attender	1	1	0
	Total	**10**	**8**	**2**

Department of Fish Processing Technology (14-109)

Sl.No.	Name of the post	Sanctioned strength	In Position	Vacant
1.	Sub-Inspector of Fisheries	1	1	-
2.	Lab. Assistant	2	2	0
3.	Iceman	1	1	0
4.	Refrigeration Operator	1	1	0
	Total	**5**	**5**	**0**

Department of Fish Quality Assurance and Management (14 -110)

Sl.No.	Name of the post	Sanctioned strength	In Position	Vacant
1.	Jr. Assistant(Non-Sec.)	1	1	0
2	Lab. Assistant	2	2	0
3.	Sweeper cum Scavenger	1	1	0
4.	Time Scale Mazdoor	1	1	0
5.	Lab. Attendant	1	1	0
	Total	**6**	**6**	**0**

Department of Library (14-117)

Sl.No.	Name of the post	Sanctioned strength	Position	Vacant
1.	Library Assistant	1	1	0
2.	Office Assistant	1	1	0
3.	Library Attendant	1	1	0
	Total	**3**	**3**	**0**

Department of Fisheries Extension, Economics and Statistics (14-125)

Sl.No.	Name of the post	Sanctioned strength	In Position	Vacant
1.	Data Entry Operator	1	1	0
2.	Time Scale Mazdoor	1	1	0
3.	Electrician Gr. II	1	1	0
	Total	**3**	**3**	**0**
	Grand Total	**101**	**94**	**7**

6.5.3. Learning resources:

Learning resources are texts, videos, software and other ICT enabled materials that teachers use to assist students to meet the expectations for learning defined by ICAR recommended curricula. Information on the on the learning resources are given under.

6.5.3.1. College Library (digital):

The information about location of the library, present staff position (in place) and availability of Wi-Fi, sufficient books and other reading materials, periodicals and research journals, internet with sufficient number of computers, seating capacity, employing the latest technology in library sciences, stocking arrangements, collection of volumes on different subjects, latest publications in the fields of relevant subjects, automation and user services

through computer, opening hours, subscription of journals of national and international repute, national dailies, magazines, etc., of the FC&RI, Thoothukudi are given below.

Location of the library

The Library of this Institute, unique of its kind, was established during February 1978 to cater to the fisheries technical needs of the user end groups of this State. The Library is housed two storied building located in the main campus. The total area of the Library building is about 515 m^2. The Library functions have been well automated and entry into the library and book transaction is made possible with RFID Technology using smart card. Presently, the computerization activity of the library has been revamped with specialized software KOHA, a comprehensive package with built in library modules, suitable for the entire library functions. Besides this, this software is more compatible with RFID Technology, which is a total security transaction module. A total of 29 video cameras have been fixed at tangible points for surveillance. The Library is a part of CeRA consortium for e-journal access at discounted rates as determined by MHRD. This enables access to the world of nascent journals on line. All the departments of this college are all well connected it through IP network. The overall administrative control is vested with the Dean of this Institute and also overseen by the Library Officer (Dr. N.V.Sujathkumar, Professor and Head, DFEES, FC&RI, Thoothukudi).





Buildings:

Total area of the building : 515 sq. m.

1. Book Section (Ground floor) : 1560 sft.
2. Book Section (First floor) : 1560 sft.
3. Back volume section : 750 sft.
4. Periodical Section : 750 sft.
5. Theses Section : 265 sft.
6. Competitive Exam Promotion Cell : 466 sft.
7. Educational Video Hall : 745 sft.
8. Server Room : 185 sft.
9. Computer Centre : 750 sft

Present staff position:

1. Dr. R. Ezhilrani, Ph.D., Assistant Librarian
2. Mrs. M. Indirani , Attendant (S. Gr)
3. Mr. N. Viswanathan, Basic Servant (S. Gr)
4. Computer-cum -Data Entry Operator (Contractual)
5. Helper (Daily wage)

Facilities:

- Books : 18572
- Reports, Manuals and others (Free publications) : 2588
- Back volumes : 3690
- M.F.Sc & Ph.D., Thesis : 474
- Newspaper : 7
- Journals (Indian) : 30
- Online journal access through CeRA
- CD-ROM : 61
- Fisheries DVD : 40
- Educational Video Cassettes : 49
- Computers : 30
- Photocopier-cum-network printer : 3
- Scanner : 1
- WI-FI Facility
- Plagiarism Tool – URKUND
- Seating capacity - 130

Online Journals, Books and Databases :

1	**Online Databases**		
	i)	Consortium for e-Resources in Agriculture (Full text journals)	
	ii)	Krishikosh: An Institutional Repository of Indian National Agricultural Research System (Full text theses of all SAUs and Research Institutes of ICAR)	
2	**Online/E-books**		131
3	**Journals Subscribed**		
	i)	Print journals	30
	ii)	Online journals through CeRA	
	iii	Print journals received as gratis	20

E-Resources:

The internet browsing facility is available in the library premises on the basis of a user account provided by the Unit of Information Technology (IT), FC&RI, Thoothukudi. The user can access the net facility though Captive Portal. There is also the provision of accessing the internet by the students and staff using their user ID. Around 412 theses and documents were digitized and hosted at ICAR Krishikosh portal http://krishikosh.ac.in.



Employing the latest technology in library - Automation and Digitization:

The Library of FC&RI, Thoothukudi has implemented automation of library at KOHA LMS under ICAR library strengthening project. The bibliographic database of the library's collection is well functioning through the OPAC module on Koha. All the library functions have been well automated and entry into the library and book transaction is made possible with RFID Technology using smart card. Presently, the computerization activity of the library has been revamped with KOHA specialized software, a comprehensive package with built in library modules suitable for the entire gamut of all library functions. Besides this, this software is more compatible with RFID Technology, which is a total security transaction module. CCTV security and surveillance System which helps in security of library resources as well as library management.



Self-service:

To borrow a book, just touch issue on the touch screen self-service machine and then it scans the borrower's biometric details. Instructions will then be displayed on the screen to borrow a single or multiple books. To return a book, just touch return button on the touch screen, place books in the machine and follow the instructions displayed on the screen.



Book Drop Box (24×7):

The book drop box has been placed at the entrance of the Library. This is to facilitate easy return of issued library books by just dropping the books inside the drop box instead of coming physically to the library to return the book.



Book Drop Box (24×7)

Subscription of journals of national and international repute, national dailies, magazines Journals subscribed 2020

Sl. No.	Name of the journal
1	Agricultural Economics Research Review
2	Beverage & Food World
3	Current Science
4	Fishery Technology
5	Fishing Chimes
6	Indian Journal of Agricultural Economics
7	Indian Journal of Agricultural Library and Information Services
8	Indian Journal of Agricultural Marketing
9	Indian Journal of Biochemistry and Biophysics
10	Indian Journal of Biotechnology
11	Indian Journal of Experimental Biology
12	Indian Journal of Marketing
13	Indian Journal of Geo-Marine Science
14	Indian Journal of Nutrition and Dietetics
15	International Journal of Agriculture, Food Science and Technology
16	International Journal of Fisheries and Aquatic Sciences

17	International Journal of Lakes and Rivers
18	International Journal of Ocean and Oceanography
19	Journal of Aquaculture in the Tropics
20	Journal of Bombay Natural History Society
21	Journal of Bio-Science
22	Journal of Food Science and Technology
23	Journal of Indian Ocean Studies
24	Journal of Inland Fisheries Society of India
25	Journal of Marine Biological Association of India
26	Kisan World
27	Kurukshetra
28	Meenvazhakathir (Tamil)
29	Science and Culture
30	Yojana

Daily Newspaper

The Hindu
The New Indian Express
The Business Line
Dinamani
Dinathanthi
Dinamalar
The Hindu (Tamil)

List of DVD in Fisheries

Sl. No.	Name
1.	Secrets of the Underwater world
2.	Restless Sea
3.	Marine Biology
4.	Ecosystem: Aquatic Environment
5.	Fish are Interesting
6.	Fish – The food with A catch to It
7.	Vertebrates : Fish
8.	Fish & Fisheries
9.	Pisiculture in paddy field
10.	Prawns: Utilization of Waste
11.	Embryonic Development of Fish
12.	Development of Fish Embryo
13.	Fisherman
14.	Fundamentals of fish spoilage
15.	Aquarium
16.	Wonder of Dolphins

17.	Sharks and Rays: perfect predators
18.	Starfish
19.	Sponges and coelenterates: porous and sack like animals
20.	Echinoderms and Mollusks
21.	Giant turtles(zoo animals in the wild)
22.	We explore ocean life
23.	Secrets of the Sea
24.	Life under the sea
25.	River to the sea
26.	Fresh water world
27.	Lakes and streams (wilderness Ecology)
28.	Nature's camouflage
29.	Animals of A living reef
30.	Coral Reef: A living wonder
31.	Living seas, The
32.	Animals with Backbone
33.	Animals and their Homes
34.	One out of three is a fish boat
35.	An introduction to fish: processing skills
36.	An introduction to shellfish: processing skills
37.	Refrigeration and air conditioning
38.	Running Gears
39.	Marine Meteorology
40.	Plankton: floaters & drifters

6.5.3.2. Laboratories, Instructional farm, Workshops, Dairy Plant, Veterinary Clinic, Hatchery, Ponds etc.:

The laboratories, instructional farm, workshops, dairy plant, veterinary clinic, hatchery, ponds, etc., facilities available in the College with its numbers, space, specialty to conduct practical/hands on training are given under.

Laboratory Facilities:

Sl. No.	Name of the unit
1.	Soil and Water Chemistry Laboratory
2.	Reservoir and farm ponds
3.	Aquatic Microbiology lab
4.	Fisheries Museum
5.	Mother Aquarium
6.	Bacteriology unit
7.	Glass House Aquarium
8.	Fish virology and cell culture unit
9.	Fishing vessels of FRP boat 18
10.	Mariculture Research Farm Facility

11.	Cryopreservation laboratory
12.	Field lab
13.	ICAR- ELP unit
14.	Tilapia hatchery
15.	Biofloc unit
16.	Ornamental fish rearing unit I & II
17.	Equipment Instrumentation lab I & II
18.	Biochemistry Unit for Quality Assurance
19.	Microbiology Unit for Quality Assurance
20.	Molecular Biology Unit
21.	Central Instrumentation Lab
22.	Gear Technology
23.	Marine Engineering workshop
24.	Electronic lab
25.	Navigation Lab
26.	FRP Vallam 23
27.	NADP- Fish Processing Vocational Training Centre
28.	NADP- Seafood Knowledge High Way Centre
29.	Microbiology Unit for Fish Processing Technology
30.	Aquatic Animal health and Environment Management Laboratory renamed as TNJFU referral laboratory for Aquatic Animal Health
31.	Biochemistry Unit for Fish Processing Technology
32.	Fish and Shellfish Health Certification and Disease Surveillance Laboratory established under NADP under TNJFU
33.	NADP- Kayalagam Incubation Centre
34.	EDII- Marine Products Business Incubation Forum
35.	Renovated Shore Lab Field Research Facility (SRFF)

Instruments available in the College



Real time PCR



Inverted Microscope



Ultra deep freezers



Ultra centrifuge

Fish farm facilities:

The FC&RI freshwater fish farm complex was established with a total water spread area of 3.54 hectare, comprising of 0.78 hectare area of ponds and 2.76 hectare area of reservoir. The pond areas includes eight earthen ponds covering 0.58 ha, two precast slab laid earthen ponds of total 0.1 ha, two concrete ponds covering 0.1 ha. Presently, Indian Major Carps, Exotic carps and Tilapia are cultured in the farm complex for research and education purposes. The following are the routine farm activities.

1. Farm cleaning, pond preparation (deweeding, manuring and fertilizing)
2. Seed procurement and transportation, acclimatization and stocking
3. Feed and feeding management
4. Water quality monitoring, management and growth sampling
5. Harvesting and marketing
6. Fodder crop cultivation, horticulture and maintenance
7. Livestock (cow and goat) maintenance
8. Cage culture of carps in reservoirs
9. Glass house ornamental fish keeping and maintenance
10. Lab cleaning and maintenance of the machineries
11. Other works as per the instruction of the farm manager on demand basis





Division of ponds and activities:

Carp culture:

Pond No. 1,2 and 3 (500m^2) - Carp culture:

The ponds are planned to be stocked with Indian major carps at stocking density of 1/m^2 with common carp (50), silver carp (100), grass carp (50) and catla (100), rohu (100) and mrigal (100) and they will be fed with farm made feed or if possible with commercial floating artificial feed.

Pond No. 4 (1000m^2):

Presently stocked with advanced fingerlings of common carp (508), rohu (212) and mrigal (188). Presently the fishes are fed with farm made feed (rice bran and GNOC). It has been planned to replace the farm made feed with commercial pelleted feed and to install aerators.

Pond No. 8 (1000m^2):

The earthen pond is planned to be stocked at the rate of 1.0/m^2 with common carp (100), silver carp (200), grass carp (100) and catla (200), rohu (200) and mrigal (200). The fishes will be fed with farm made feed (rice bran and GNOC).

Integrated Cattle, Goat cum fish culture:
Pond No. 7 (1000m^2):

The earthen pond is planned to be stocked at the rate of 1.0/m^2 with common carp (100), silver carp (200), grass carp (100) and catla (200), rohu (200) and mrigal (200). The fishes will be fed with farm made feed (rice bran and GNOC) and has cattle shed attached to it. This pond receives the cattle shed washing and urine and which increases the primary production and serves as a model cattle cum fish culture unit.

Pond No. 11 (1000m^2):

The earthen pond is planned to stock at the rate of 1.0/m^2 with common carp (100), silver carp (200), grass carp (100) and catla (200), rohu (200) and mrigal (200). The fishes will be fed with farm made feed (rice bran and GNOC). This pond receives goat shed washing and urine and serves as model Goat cum fish culture unit.

GIFT tilapia culture:

Pond No. 5 and 6 (500m^2):

Presently the precast slab laid earthen pond is planned to stock GIFT tilapia at the rate of 3/m^2. The fishes will be fed with farm made feed (rice bran and GNOC).

Integrated Horticulture cum shellfish culture:

Giant freshwater prawn/scampi culture:
Pond No. 9 (500m^2):

This concrete pond is planned to stock with Giant freshwater prawn/scampi seed at the stocking density of 10/m^2 and fed with commercial pelleted feed and also installed with aerators. Further this pond is integrated with horticulture (banana and country vegetables) crops

Pacific white shrimp *(Litopennaeus vannamei)* culture:
Pond No. 10 (500m^2)

This concrete pond is planned to stock with freshwater acclimatized pacific white shrimp *(Litopennaeus vannamei)* at stocking density to 40/m^2 and fed with commercial pelleted feed and also installed with aerators. . Further this pond is integrated with horticulture (banana and country vegetables) crops

Pangasius culture:
Pond No. 12(300m^2):

Presently stocked with pangasius (200) and fed with farm made feed (rice bran and GNOC). It has been planned to increase the stocking density to 10/m^2, replace with commercial pelleted feed.

Reservoir (2.76ha)

The reservoir has been planned to stock with Indian major and exotic carps and further at present cage farming of common carp is under operation. It has been further planned to take up high density cage farming of fish species such as seabass, pangasius and GIFT strain of tilapia.

6.5.3.3 Student READY/ In-Plant Training / Internship / Experiential Learning Programmes:

The implementation of Student READY/ In-plant training/ Internship/ Experiential Learning programmes and learning outcomes are as per the guidelines of ICAR. Profit sharing mechanism (amount) is also mentioned for each ELP unit sanctioned by the ICAR for the college.

No.	Academic year	Batches	No. of students undergone programme	Details of work done
1	2016-17	2013-14	30	IPT 421 In-Plant Training (0+20) programme for IV B.F.Sc. students as VIII semester with total credit of 20. The following programmes were conducted for 105 days: 1. Attachment with fish processing plants(42 days – 8 credits) 2. Attachment with aquaculture farms(63 days – 12 credits)
2	2017-18	2014-15	35	
3	2018-19	2015-16	34	FS 401 & 402 Students' READY Programme implemented based on the recommendations of V Dean's committee meeting conducted as per the recommendations of the V Deans Committee meeting, ICAR, New Delhi

Details of FS 401 conducted:

- In-Plant attachment for 14 credits with 70 days and 65 marks
- Rural Fisheries Work Experience for 4 credits with 10 days and 20 marks
- All India Study tour for 2 credits with 25 days for 15 marks

In-Plant attachment for 14 credits (70 days, 65 marks):

The students were attached with fish processing plants in and around Thoothukudi Dt. The following plants were identified and the students were sent to thwawn plants to get experience in fish processing activities:

- Deva & Co Seafoods (5 students)
- Idhayam & Co Seafoods (5 students)

- Ninan Pvt. Ltd. Seafoods (5 students)
- Kadhar Investments and Trading Company (4 students)
- V.V. Marine Products (6 students)
- Kings Seafoods (5 students)
- Diamond Seafoods (4 students)

The following fish / shrimp farms were identified and the students were sent to these farm to get experience in fish / shrimp farming activities.

- Himalayan Fish Farm, Thittai, Thajavur (5 students)
- Chola Fish Farm, Vaduvoor, Thanjavur (4 students)
- Amman Shrimp farm, Mimisal, Pudukkottai District (3 students)
- Mariculture Research Farm Facility, Tharuvaikulam, Thoothukudi (6 students)
- Ornamental Fish Farm, Keeranoor, Thoothukudi (3 students)
- Ornamental Fish Farm, Edaiyarkadu, Thoothukudi (3 students)

Rural Fisheries Work Experience for 4 credits (10 days, 20 marks):

The following fishing villages in and around Thoothukudi District were identified to under Rural Fisheries Work Experience by the students

1. Tharuvaikulam
2. Therespuram
3. Punnakayal
4. Kombuthurai
5. Amalinagar

All India Tour (Study tour):

The Students have under gone AIT for 25 days under the leadership of faculty of College.

Details of FS 402 Conducted:

- Skill development in the following aspects: (with a total of 5 credits for 25 days and 25 marks)

1. Formulation and preparation of aqua feeds (For 1 credit, 5 days and 5 marks)
2. Analysis of soil and water quality parameters (For 2 credits, 10 days and 10 marks) and
3. Preparation of fishery products (2 credits, 10 days and 10 marks)

- Experiential Learning Programme (ELP) for 15 credits with 80 days and 75 marks.

  Students were attached to Department of Aquaculture and Fish Processing to undergo the Skill Development Programmes in the fields of preparation of aqua feeds, analysis of water and soil quality parameters and preparation of value added fishery products.

  Students were attached in the Department of Aquaculture and Fish Processing Technology to undergo the experiential learning in fish farming, shrimp farming and fish processing activities.





Profit sharing mechanism:

The profit from Experiential Learning Programme will be shared to the concerned allotted to students in the specific field based on the total profit earned divided by the number of students.

5	2020-21	2017-18	55	FS 401 & 402 conducted as per the recommendations of the V Deans Committee meeting, ICAR, New Delhi ❖ Due to COVID -19 pandemic, **Online** for IPT and RFWE undergone ❖ Off line (At Campus) AIST, Skill Development Programme and ELP undergone

Major activities:

For the year 2020-21 (2017-18 batch B.F.Sc. students) during VII Semester from 15.07.2020 to 04.01.202. following activities were followed with the special proposal for the programme as per contingent plan of the University to combat COVID-19 pandemic.

In-Plant Training (IPT):

- Assignment / mini project work on fisheries based on the data collected from different online and offline sources / Home based fisheries project– Field experience exercises were allotted to the students.
- Evaluation done through online for the project work done by the students from their home/ native places for a total of 70 days (14 credits, 65 marks).
- Evaluation done based on the University contingent plan. The marks were allotted for the following aspects.

Mini project	: 20 marks
Record/field diary	: 15 marks
Field experience presentation	: 20 marks
Online viva voce	: 10 marks

Rural Fisheries Work Experience (RFWE):

- Assignment on the socioeconomic status of fishermen - based on the data collected from different online and offline sources.
- Evaluation done through online for the assignment done by the students from their home/ native places for a duration of 10 days (04 credits, 20 marks).
- Evaluation done based on the University contingent plan. The marks were allotted for the following aspects.
- Assignment on the socioeconomic status of fishermen based on the data collected from different online and offline sources: 10 marks and Online experiential learning: 10 marks

All India Study Tour Programme (AIST):

- Assignments on fisheries development organization and programmes on all India basis were given to the individual students and they have also been allotted to all the Departments of the College for the undergoing the short term projects in the respective disciplines.
- Evaluation was done by the Head of the Departments for the project work done by the students at the Department for a duration of 25 days (02 credits, 15 marks).
- Evaluation done based on the University contingent plan. The marks were allotted for the following aspects.

- Assignments on fisheries development organization and programmes on all India basis: 15 marks and Online viva-voce: 05 marks

For the year 2020-21 (2017-18 Batch B.F.Sc. students) during VIII Semester from January 2021 onwards (tentatively)

- Students were attached to Department of Aquaculture, Aquatic Environment Management and Fish Processing to undergo the Skill Development Programmes in the fields of preparation of aqua feeds preparation, analysis of water and soil quality parameters and preparation of value added fishery products respectively for 05 credit (25 marks, 25 days).

- Students will be attached to the Department of Aquaculture and Fish Processing to undergo the Experiential Learning Programme (ELP) in fish farming, shrimp farming and Fish processing activities for 15 credit (75 marks, 80 days).

6.5.3.4. Curricula Delivery through IT (smart class rooms/interactive board etc.):

The College is using smart class rooms/interactive boards, etc., for teaching and practicals. Number of class rooms upgraded as smart class rooms are furnished below.

At present a total of two classrooms are equipped with smart touchscreen TVs with Wi-Fi connectivity. Shortly, another two class rooms will be provided with smart class rooms facilities.

6.5.4. Student Development:

Student Development at the College directs its educational efforts at fostering the intellect and character of students by integrating in-class and co-curricular experiences. To accomplish this, the College provides a wide range of educational experiences through programmes and activities that complement and support the academic experience in the classroom.

6.5.4.1. Student Intake and Attrition:

The information about student intake and attrition, for the College as a whole but separated in UG, PG and PhD categories is provided in tabular form for last five years.

Name of the Degree Programme	Actual student admitted in last five years					Attrition (%)				
	2016-17	2017-18	2018-19	2019-20	2020-21	2016-17	2017-18	2018-19	2019-20	2020-21
BFSc	50	62	67	72	47	6	11.29	8.96	9.72	12.3
MFSc	19	24	33	13	22	5.26	12.5	9.09	0	9.09
Ph.D.	8	4	15	9	15	12.5	75	20	33.33	20

6.5.4.2. Number of Students in Theory and Practical Classes:

Number of students sitting in a class for theory and practical, separately in tabular form for Degree Programme-wise are furnished below (complete list of academic programmes (UG and disciplinewise for MFSc and Ph.D.) for which accreditation sought is also provided. The list should provide only programmes in which students are already passed out.

Degree	2016-17		2017-18		2018-19		2019-20		2020-21	
	Theory	Practicals	Theory	Practicals	Theory	Practicals	Theory	Practicals	Theory	Practicals
BFSc	47*	47*	55	28*+27*	61	31*+30*	65	33*+32*	46	23*+23
MFSc	18	**	21	**	30	**	13	**	20	**
Ph.D.	7	**	1	**	12	**	6	**	12	**

*- Practicals conducted in two batches

**- Practicals conducted separately in respective departments

6.5.4.3. Admission Process:

The complete mechanism of admission for UG, PG and Ph.D. programmes, fee payment mechanism, registration procedure, academic schedule publication at the start of the semester, etc., are furnished hereunder.

UG admission:

Candidates shall be selected through online admission procedures on the basis of marks obtained in the Higher Secondary Course (10 + 2) examinations conducted by the Board of Higher Secondary Examinations, Tamil Nadu and as per the directions received from the Government of Tamil Nadu from time to time. A registration and orientation programme will be conducted by the Dean of the College for the benefit of the students joining the University for the first time. The students shall be allowed to register for the semester only after payment of fees given in the prospectus and production of clearance certificates from the hostel, library and such other places (other than first semester).

An academic calendar is prepared by the Students Coordinator of the batch for the benefit of the students. The academic calendar contains rules and regulations pertaining to payment of fee, fine levied in case of late payment. Exam pattern and evaluation procedures, hostel rules, etc., are also available in the calendar.

PG admission:

Candidates possessing four year BFSc degree are eligible for MFSc degree programme. The candidates are selected through online admission procedures. Common entrance examination is conducted to fill in the seats in MFSc degree programme. The selection of candidates for MFSc is done based on the marks obtained by the candidates which include marks in the entrance examination, OGPA in BFSc degree, academic medals and work experience. Eligible candidates as per their rank will be called for counselling. The selected candidates can choose anyone of the available discipline of their choice.

Ph.D. admission:

Candidates possessing MFSc degree programme in the concerned subjects are eligible for Ph.D., degree programme. The candidates are selected through online admission procedures and entrance examination is conducted disciplinewise to fill the seats. The candidates will be selected based on the marks obtained in the entrance examination, OGPA in MFSc, publication, awards and medals and work experience. Eligible candidate as per rank list will be called for counselling and seats are allotted to the candidates based on the availability of seats in the discipline.

6.5.4.4. Conduct of Practical and Hands on Training:

A brief report on how the practical and hand-on-training is being conducted in different courses to meet the student satisfaction are furnished below.

The hands-on-training for the MFSc and Ph.D., students are currently handed by the course teachers of the respective departments. The students are being provided hands-on-training either in the farm or field for various courses offered by the department in different semesters. Further, the students are also taken to the private shrimp / fish farms, processing industries, fishing villages, government organizations, NGOs, Export Inspection Agencies, Microbiological laboratories, etc., for practical exposure. Guest lectures from eminent scientists, entrepreneurs, fish / shrimp farmers, fishermen, etc., are also arranged. In addition, students are also given assignments on various aspects of fisheries and they have to collect and present it with the help of PowerPoint slides. Group discussions by the students in the practical classes are also conducted in order to have better understanding on the concepts. Their droughts and queries are answered by the course teachers / staff of the concerned department. The students are instructed to submit their record works at the end of the semester which will be evaluated by the course teacher.

6.5.4.5. Examination and Evaluation Process:

The evaluation of students' performance is a central task of College administration. A brief report on examination and evaluation process for UG, PG and Ph.D., is given separately mentioning external/internal components. System of evaluation is also mentioned in the **Annexure II** for UG, PG and Ph.D., degree programmes.

6.5.4.6. NCC/NSS/RVC Units:

A brief report of the existence and functioning of NCC/NSS/RVC units and how it is benefiting the student development is given below.

The NSS unit of the Fisheries College and Research Institute, Thoothukudi is established with an enrolled strength of 100 student volunteers. The aim of the unit is to motivate and train the student in social activities and management. As part of this motto, this unit organizes special camps, one of such a camp was organized at Kalankarai village of Thoothukudi District from 24.03.2017 to 30.03.2017. The week-long Special Camp intended to organize several awareness and training programmes that included: training on value addition of fish, general free medical camp, free eye camp, Dengue awareness campaign, health & hygiene, ornamental fish culture, awareness on TB, total sanitation, skill competitions, awareness on cashless money transfer methods and English tuition for school children among others. A 100% Dengue free village Campaign organized on 27.03.2017 as part of the NSS special Camp held at Kombuthurai village from 24.03.2017 to 30.03.2017. The students rallied through the streets of this village encouraging all the people to take precaution to get rid of female Aedes mosquito. Slogans stressing the importance of driving the mosquitos were shouted on the streets. A mock drill was organized marking the International Day for Disaster Reduction to increase awareness on fire safety, rescue during disasters, first-aid etc. to avoid mortality at times of disaster or accidents on 13.10.2016. Blood Donation camp organized on 30.06.2016, forty two units of blood of various group was collected by the district blood bank officials. An Eye Camp was organized along with Dr. Agarwal's Eye Hospital, Thoothukudi on 29.09.2016, a total of 134 persons including staff and students benefitted from the camp. The unit observed the "Vigilance Awareness Week 2016" from 31.10.2016 to 05.11.2016 under the theme, "Public Participation in Promoting Integrity and Eradicating Corruption" as proposed by Central Vigilance Commission (CVC), Govt. of India.

It organized an awareness programme on "Digitalization of Transactions in Fish Market" at Kombuthurai Village on 06.01.2017. The programme was organized under the "VISAKA" campaign implemented by Government of India from 12thDecember, 2016 to 12th January, 2017. The NSS unit of this institution identified the fish market of

Kombuthurai Village to transfer it into a digital market place and enable the fishermen with digital payment systems.

The next special camp was held at Kurukattoor village of Thoothukudi district from 12.03.2018 to 18.03.2018. A seminar on 'Personal hygiene and Eradication of Dengue' on 03.08.2017. An awareness programme on 'Eradication of Dengue and Anti-Dengue Measures' on 30.10.2017. A cleaning drive was arranged at Muthu Nagar Beach on 24.02.2018.

As part of the observance of "International Day against Drug Abuse and Illicit trafficking", a special seminar on "Learning disorders and Drug abuse" was organized by NSS unit of Fisheries College and Research Institute, Thoothukudi on 28.06.2018.

An Awareness cum cleaning drive at Port Trust Beach on 02.10.2018 to mark the birth anniversary of Mahathma Gandhi. The importance of keeping the beaches clean was stressed to support the Government of Tamil Nadu Initiative on "Plastic Free Tamil Nadu". "Pot Painting" was held as part of Voter awareness programme on 26.03.2019. Twenty students of this college were actively participated and portrayed different images on the pot with the theme "VOTE" organized a "Rally" with 250 students from Teachers colony to old bus stand as part of Voter awareness programme on 30.03.2019. 23 NSS volunteers served as Parliamentary Election Volunteer and Assisted Thoothukudi SIPCOT Police on 18.04.2019. On the eve of 150th Birth Anniversary of Mahatma Gandhi, this unit conducted Essay writing competition both in Tamil and English on 25.09.2019. Elocution competition was conducted on the eve of Constitution day between 25.11.2019 and 26.11.2019.All these programs provided an opportunity for the students to serve the nation and also to get trained.

6.5.4.7. Language Laboratory:

It is required of any student to have a good command of the language for communication purposes, with clarity and accuracy being vital for effective and efficient communication. The FC&RI, Thoothukudi doesn't have any language laboratory at present, however, the students are taken to the language laboratory of Annammal Teachers Training College for developing proficiency in English language. The undergraduate students are regularly sent for improving language proficiency.

6.5.4.8. Cultural Centre:

The college has Students Association to empower student leaders to explore, celebrate, and educate the campus community about the diversity among them. The institute offers an inclusive and reflective space, multicultural programming, and support services that encourage positive interaction, academic persistence, and growth among

students, faculty and staff. The following are some of the cultural and sports events organized at the Institute.

- FIZZOREE 2016- An inter-collegiate quiz competition was conducted at FC & RI, Thoothukudi on 24.02.2016.
- The NSS unit of the FC & RI, Thoothukudi organized a 100% Voting Awareness Campaign on 02.04.2016.
- The Commencement Ceremony 2016 of 2016-17 batch of FC & RI, was conducted at FC & RI, Thoothukudi campus on 20.06.2016.
- The NSS unit of FC & RI, Tamil Nadu Fisheries University (TNFU), Thoothukudi organized a Blood Donation Camp on 30.06.2016.
- The Students' Association of FC & RI, Thoothukudi for the year 2016-17 was inaugurated on 21st October 2016.
- FC & RI, Thoothukudi observed "Vigilance Awareness Week 2016" in collaboration with NLC Tamil Nadu Power Limited (NTPL) from 31.10.2016 to 05.11.2016 under the theme, "Public Participation in Promoting Integrity and Eradicating Corruption" as proposed by Central Vigilance Commission (CVC), Govt. of India.
- FC & RI, Thoothukudi celebrated "World Fisheries Day" on 21.11.2016.
- FC & RI, Thoothukudi celebrated "Hostel Day" on 25.11.2016/
- The students and staff of FC & RI, Thoothukudi, celebrated Pongalfestival on 12.01.2017.
- National Science day was celebrated at FC & RI, Thoothukudi on 28.02.2017.
- FISFEST 2017- An Inter collegiate cultural competition was organised by the Students Association of FC & RI, Thoothukudi on 1st March, 2017.
- FIZZOREE 2017- An inter-collegiate quiz competition "FIZZOREE 2017" was conducted at FC & RI, Thoothukudi on 28.02.2017.
- The Annual Sports Meet 2016-17 of the FC & RI, Thoothukudi was conducted at the college ground on 10.03.2017.
- The NSS unit of FC & RI, Thoothukudi organized a seminar on 'Personal hygiene and Eradication of Dengue' on 03.08.2017.
- Celebration of "Constitution day" was carried out at FC&RI, Thoothukudi 27.11.2017.
- "Coconut sapling plantation day" on the eve of Hostel day celebration at the boy's hostel premises of FC&RI, Thoothukudi at 29.12.2017.
- Agricultural Education Day was celebrated at FC & RI, Thoothukudi on 05.01.2017.
- Intra-University level Fisheries Science based meet entitled "FISHNOVA 2018" on 19.01.2018 at FC & RI, Thoothukudi.
- FISFEST 2018- An Intercollegiate cultural competition was organised by the Literary Association of Students' Association of FC & RI, Thoothukudi on 23.02.2018.
- FIZZOREE 2018- An inter-collegiate quiz competition was conducted at FC & RI, Thoothukudi on 22.02.2018.
- International Women's Day celebration was observed at FC & RI, Thoothukudi on 08.03.2018.

- FC & RI, Thoothukudi organized the NSS Special Camp at Kurukattoor Village from 12.03.2018 to 18.03.2018.
- The Annual Sports Meet 2017-18 was conducted at FC & RI, Thoothukudi on 23.03.2018.
- College Day of the FC & RI, Thoothukudi was celebrated on 28.03.2018.
- FC & RI, Thoothukudi celebrated the **"4th International Day of Yoga"** on 21.06.2018.
- FC & RI, Thoothukudi celebrated "Hostel Day" on 28.12.2018.
- An inter-collegiate quiz competition "FIZZOREE 2019" was conducted at FC & RI, Thoothukudi on 21.02.2019.
- The Annual Sports Meet 2018-19 of the FC & RI, Thoothukudi was conducted at the college grounds on 08.04.2019.
- The College Day of FC & RI, Thoothukudi was celebrated in a grand manner on 26thApril, 2019.
- Commencement ceremony was conducted for the outgoing B.F.Sc. students (2015-16 batch) on 14.06.2019.
- An inter-collegiate quiz competition "FIZZOREE 2020" was conducted at FC & RI, Thoothukudi on 05.03.2020.
- FISFEST- an intercollegiate cultural competition was organized by the Literary Association of Students' Association of FC & RI, Thoothukudi on 06.03.2020.







6.5.4.9. Personality Development:

Personality development programme is aimed at increasing employability of the students. The college has provisions for inclusion of functional grammar in Standard English, speaking skills, reasoning, group discussions interview skills, personal interviews, quantitative ability, verbal ability, mock tests and some special sessions to promote the personality development in the students.

A series of special programme is organized for the benefit of the students of the College to gain confidence, self-esteem, positive impact on one's communication skills and the way one sees the world. Due importance is given for soft skills as they enable students to adjust to the frustrations and challenges, they encounter in their life as well as the demands of work. Mastering soft skills help students learn, live and work better. The time table of UG students is prepared in such a way that Thursdays between 11.15 am to 1.15 is allotted solely for Personality development programme. An Assistant Professor is nominated for organizing such programmes. Some of the programmes organized form the year 2016 is listed below.

- Challenges in transfer of Technology
- Leadership in action
- Prime your thoughts to success
- Championships of all seasons
- Art of achieving
- Making the best of college years
- Tips to improve Self Confidence
- Developing managerial skills for entrepreneurship
- Leadership and development



6.5.5. Physical facilities:

6.5.5.1. Hostels:

The number of hostels available for the College students for boys and girls, separately with its total capacity, students per room accommodated in each hostel, mess facility, drinking water, indoor games specially for girls, cleaning of hostel premises, transport facility, emergency medical facility, etc., are furnished hereunder.

Fisheries College and Research Institute, Thoothukudi has two hostels, the boys' hostel located in the main campus at the harbour bye-pass road and girls' hostel located in the staff-quarters campus at Teachers' colony, Thoothukudi. The hostel accommodates 260 students comprising of 133 boys and 127 girls during the year 2019-2020. Besides students from Tamil Nadu, Kerala, Andhra Pradesh, Telangana, Gujarat, Odisha, Uttar Pradesh, Karnataka, Madhya Pradesh, Uttarakhand, Mizoram, Meghalaya, West Bengal, Kashmir and Maharashtra are also staying in these hostels.

Each hostel is administered by a Warden and Deputy Wardens (Boys and Girls). One assistant and a typist assist in the hostel administration. Apart from them five basic servants are maintaining the cleanliness of the hostel. Both boys and girls hostel have separate mess run on a 'Dividing system'. Both the hostels have separate UG and PG blocks. A Students Mess Manager assisted by mess representatives from each year

maintains the mess under the direct supervision of the hostel administration. A student hostel secretary assisted by hostel representatives from each year maintains the respective hostel premises under the direct supervision of the hostel administration. Kitchens are available in both the hostels which are **Food Safety and Standards Authority of India** (FSSAI) certified and are properly maintained with no compromise in the quality of food.

The hostel amenity committee meets regularly to review the hostel accounts and mess rates and recommend necessary measures for the efficient and economical functioning of student mess.

A reading room facility with newspapers and periodicals (weekly and monthly) is available in the hostel campus for both hostels. Magazines provided in the reading room help the inmates to prepare for the civil service, ICAR and other national and international competitive examinations.

Separate recreation halls are provided for watching TV programmes. The inmates are provided with indoor gymnasium facilities. The hostel is provided with nine computers with internet connection, six to the boys and three to the girls' hostels. Three washing machines to the boy's hostel and four washing machines to the girl's hostel have been provided that enable them to spend more time on studies. Necessary recreational facilities have been provided to the boys and girls hostels by means of installing TV and DVD players with music systems. Both hostels provided with R.O. drinking water. A throw ball playground facility has been established.

On 12.11.2020, a newly constructed Boys Hostel was inaugurated by Dr. P.S. Pandey, Assistant Director General (EP&HS), ICAR, New Delhi through video conference in the presence of our Honourable Vice Chancellor with an outlay of Rs. 115 lakhs under ICAR Development Grant. Our Honourable Vice Chancellor inaugurated Water Purifier with a capacity of 500l/hr. at Girls hostel for which a shed has been constructed and plumbing works were carried out.

Proposal for the construction of PG extension blocks to raise 17 rooms with an outlay of Rs. 3.5 crores has been submitted to NABARD. Proposal has also been submitted for seeking funding support from NABARD to raise the 2 floors in the existing UG Girls Hostel to meet out the increased students' strength. Construction of Boys Hostel Block including 33 rooms with an out lay of Rs. 6.11 crores is under process.



Boys School



Girls Hostel

Status of Boys Hostel Accommodation:

Facilities	Available rooms	Capacity	Enrolled
Old UG Block	16	48	64
New UG Block	13	39	48
PG Block	10	20	35
Total	**39**	**107**	**147**

Status of Girls Hostel Accommodation:

Facilities	Available rooms	Capacity	Enrolled
Old UG Block	16	45	40
New UG Block	10	30	58
PG Block	11	22	35
Total	**37**	**97**	**133**

6.5.5.2. Examination hall:

The availability of number of examination halls, its capacity etc. for the College are given below.

The College has two examination halls one with a capacity of 100 and another with a capacity of 80 seats.

6.5.5.3. Sports and Recreation Facilities:

The number of indoor and outdoor sports facilities are available for the College students. A brief note on the day-to-day management and use of these facilities are provided here.

Sl. No	Facility	Nos.	Image	Use
	Outdoor			
1	Football Field	1		The football field consists of flood light, which is maintained by a marker. The field is being used by students regularly to play football, cricket, practicing athletic events
2	Volleyball court	3		The individual volleyball court for men and women consists of flood light, which is maintained by a marker. The court is being used by students regularly to play volleyball.

3	Basketball Court	1		The basketball court located at college campus consists of flood light, which is maintained by a marker. The court is being used by students regularly.
4	Kabaddi court	1		The Kabaddi court located at college campus consists of flood light, which is maintained by a marker. The court is being used by students for their regular practice.
5	Kho-Kho court	1		The Kho-Khocourt located at college campus consists of flood light, which is maintained by a marker. The court is being used by students for their regular practice.
	Indoor			
1	Fitness centre	2		The fitness centre consists of Multi-gym for men and women separately. The centre is being used by the students to improve health.

2	Badminton court	1		The Badminton court provided with flood light. The facility is being used by the students to improve health.
3	Table Tennis	2		The Table Tennis provided for men and woman separately. The facility is being used by the students to improve health.

6.5.5.4. Auditorium:

The college has an auditorium and its year of construction, sitting capacity and how frequently being used for the College functions are provided below.

The College has an auditorium named “Kayal” with a seating capacity of 250 was constructed during 1998. Cultural events, functions and other programmes are being taken place in the auditorium very frequently. The auditorium has well equipped with audio visual facilities.



6.5.5.5 Exhibition Hall/Museum:

The college has an Exhibition Hall/Museum. Its use and special events being conducted in these units are provided below.

A Fisheries Museum that houses about 1000 specimens of various aquatic organisms such as finfish, shellfish, corals, sponges, reptiles, mammals, etc., is being maintained by the Department of Fisheries Biology and Resource Management. Skeletal systems of two different whale species and stuffed specimens of dolphins, fin fishes and aquatic birds are also available. The specimens are used to teach courses like taxonomy of finfish and taxonomy of shellfish. In addition, visitors of the museum are educated about the value of aquatic biodiversity and the need for proper conservation and management of aquatic resources by displaying the specimens in see through racks.









6.5.6. Research Facilities:

6.5.6.1. Postgraduate Laboratories and Equipments:

The departmentwise PG laboratories and equipment housed in individual laboratory in the Colleges along with other research unit are furnished below.

Equipment available under each Department:

S. No.	Name of the equipment	Quantity	Whether in AMC
1)	**Dept. of Aquatic Environment Management**		
1.	Fermenter	1	No
2.	Spectrophotometer	1	No
3.	Nitrogen analyser	1	No
4.	Microscope	1	No
5.	Gel Electrophoresis unit	2 Nos.	No
6.	Thermal cycler	1	No
2)	**Dept. of Fisheries Extension, Economics and Statistics**		
1	Kyocera KM-2035	1	No
2	HP	3	No.
3	Cyberoam Firewall	1	No
4	LCD projector	2	No
5	Public Address System	2	No
6	Xerox Machine	2	No
3)	**Dept. of Fish Pathology and Health Management**		
1.	Thermal cycler	2	No
2.	Geldoc	1	No
3.	Microscopes	2	Yes
4.	ELISA reader	1	No
5.	UV Vis spectrophotometer	1	No
6.	Water purification system	1	No
7.	Biosafety cabinet	2	No
8.	Cooled incubator	2	No
9.	Real time PCR	1	No
10.	Ultra centrifuge	1	No
4)	**Department of Fisheries Biology and Resource Management**		
1.	Tissue Processor	1	No
2.	Tissue Embedder and Cold Plate	1	No
3.	Microtome	1	No
4.	Microscope with Image Processing System	1	No
5.	Rotary Evaporator	1	No
6.	ELISA Reader Bio Tek ELX 800	1	No
7.	Nikon Microscope- model E50i	1	No
8.	New Brunswick Premium Ultra low temperature vertical freezer	1	No
9.	Refrigerated centrifuge Eppendorf 5804R	1	No
10.	Double distillation Unit	1	No
11.	Incubator	1	No
12.	Hot air oven	1	No
13.	Laminar flow chamber	1	No
14.	Gel documentation system	1	No

15.	Electrophoresis unit	2	No
16.	UV vis Spectrophotometer	1	No
17.	Underwater video-camera	1	No
18.	Iso-electric focusing cell	1	No
19.	Visualizer cum Image presenter (Model No. TC-10P)	1	No
5)	**Department of Fish Quality Assurance and Management**		
1	LC-MS/MS System	6	Yes
2	ICP MS System	4	No
3	UPLC System	1	Yes
4	GC-MS System	1	No
5	Gas Chromatograph	1	Yes
6	Column Chromatograph	1	No
7	FTIR	10	No
8	Universal Testing Machine	9	No
9	Lyophiliser	1	No
10	UV-Vis Spectrophotometer	7	Yes
11	Spectroflourometer	1	No
12	RT-PCR Machine	1	No
13	Gradient PCR	8	No
14	Refrigerated centrifuge	15	No
15	Bio-safety cabinet	20	Yes
16	Microfuge	1	No
17	Gel documentation	1	No
18	Kelplus apparatus	2	No
19	Socplus apparatus	1	No
20	Fiberplus apparatus	1	No
21	Water purification system	25	No
22	Vacuum packaging machine	1	No
23	3 in 1 photo copier	1	No
24	Gas Analyser	1	No
25	Water activity meter	1	No
26	Ice flaker	1	No
6)	**Dept. of Fish Processing Technology**		
1	Flake Ice Machine	1	No
2	Deboner	2	No
3	Deskinner	2	No
4	Ultra Deep Freezer	3	No
5	Protein Analyser	1	No
6	Fat Analyser	1	No
7	Fibre Analyser	1	No
8	Over Head Pressure Retort	1	No
9	Rotary Baking Oven	1	No
10	Twin Screw Extruder	1	No
11	Bottle Capping Machine	2	No
12	Shrink Wrapping Machine	1	No
13	Thermal Cycler	1	No

14	Gas Chromatograph	1	No
15	UV-Vis Spectrophotometer	2	No
16	Viscometer	1	No
17	Phase Contrast Microscope	1	No

6.5.6.2. Research Contingency:

There is no research contingency exclusively available for Post Graduate students. However, students can make use of the recurring contingencies available in the department for their research work and it meets all the students' demands.

6.5.7. Outcome/Output:

6.5.7.1. Student Performance in National Examinations:

A detailed information in tabular form about student performance in JRF/SRF/NET/ARS/and other national examinations for last five years are furnished below.

Sl.No.	Passed out	JRF	Non JRF	Total
1	2015-16	6	8	14
2	2016-17	0	15	15
3	2017-18	1	7	8
4	2018-19	3	8	11
5	2019-20	3	12	15

6.5.7.2. Students Placement Profile:

Provided detailed information in tabular form about student performance in ARS/and other national examinations/State level examinations or equivalent. Yearwise placement profile is also provided.

The students' placement and career guidance cell of Fisheries College & Research Institute, Thoothukudi has been functioning at FC&RI, Thoothukudi since 2003. It arranges for the conduct of campus interview for the selection of fisheries graduates for various corporate companies. The cell maintains a computerized database of fisheries graduates and postgraduates. Utilizing this database, the cell provides the list of graduates to the recruiting agencies. The cell collects and disseminates higher education information available from various sources for the welfare of the student community. The cell regularly sharing the job availability details to current and passed out students through email and social media. The cell conducts mock examinations to make the students industry ready. It also assists the industry as well as other organizations to source the fisheries professionals for their company by providing passed out students' bio-data.

The cell also provided the list of fisheries gradates' biodata to Shenlong, Muthuzhaglu fish farm, Gadre Marine Export Pvt. Ltd and Kemin Aquascience, etc., for the placement of fisheries graduates.

During the year under report (2019-20), the cell has contacted the following concerns for the placement of fisheries graduates.

1. M/s. CP Aquaculture Private Limited, Chennai (Selvin Jayakumar - 9940013015)
2. M/s Muthazhalgu fish farm, Theni district (Sudhakar K.P. - 7373747583)
3. M/s Gadre Marine Export Pvt. Ltd. (Dr. Arote - 9823120179)
4. Kemin Aquascience Pvt. Ltd (Edwin – 9941394171)

The graduates are well placed in various central and state organizations, universities and private sectors. Some of them have transformed into big entrepreneurs and providing job opportunities for a fairly large number of people.

Students Placement Profile for the last five years

Particulars	2015-16	2016-17	2017-18	2018-19	2019-20
Students passed out	33	37	35	37	48
Higher studies	13	20	09	19	27
Government Employment	09	08	03	--	--
Private Employment	10	07	13	16	12
Abroad	01	02	03	--	02
Job seekers	--	--	07	01	07

6.5.7.3.Awards/Recognitions/Certificates:

The information on awards/recognitions/certificates in tabular form for last five years separately for students and faculty are furnished below.

Awards received by Staff:

S. No	Name of the Staff	Name of the award	Year
1	Dr.S.Athithan	Distinguished Scientist Award in the field of Fish Nutrition by Venus International Foundation, Chennai, Tamil Nadu	2016
		Best Professor Award in the field of Coastal Aquaculture by Pearl Foundation, Madurai, Tamil Nadu	2016
		Best Researcher Award by Education Expo TV's (Research Wing for Excellence in Professional Education & Industry) New Delhi	2017
		Best Innovative Extension Worker Award	2018

		(2017) By Society for Advancement of Agricultural Innovations (SAAI), Innovative Farming Journal, Khowai- 799201, Tripura	
		Outstanding Teacher Award SOCIETY FOR BIOTIC AND ENVIRONMENTAL RESEARCH (SBER) (A Scientific Society Registered under SRA 1860) Regd. No. 8067 of 2019, NITI Aayog ID No. TR/2019/0229149, Khowai, Tripura - 799201, INDIA for Commendable Contribution in the Field of Aquaculture Covering Teaching, Research & Extension Activities	2020
2	Dr. C. Judith Betsy	TNFU Gold Medal	2017
		Dr. T. M. Samocha Gold Medal	2017
3	Dr. B. Chrisolite	Best Scientific paper award for the paper of the Fishery Technology journal by the Society of Fisheries Technologists	2019
4	Dr. Ranjeeta Kumari	Best Presentation award at 19thInternational Conference on Molecular Virology and Microbiology held at Bangkok, Thailand.	2018
5	Dr.V.Rani	Best Paper award at the third National Conference on Agricultural Scientific Research held at TNAU, Coimbatore	2017
		"Young Professional Award" by Agricultural Scientific Tamil Society, New Delhi during 5th National conference on "Agricultural Scientific Tamil Conference" at Tamil Nadu Agricultural University, Coimbatore	2020
		"Best Book Award" by Agricultural Scientific Tamil Society, New Delhi during 5th National conference on "Agricultural Scientific Tamil Conference" at Tamil Nadu Agricultural University, Coimbatore	2020
6	Mrs. D. Manimekalai	Best Paper Presentation during 6th National Tamil Conference 2021	2021
7	Dr. P. Ganesan	Fellow Membership FWRA by World Researchers Associations for outstanding recognition of achievements and for promotion of research and environment.	2019
8	Mr. M. Muruganantham	Best Teacher Award for the year from TNJFU	2017

		Best Paper Presentation Award during 5th ASTS Conference – Fisheries Technical session	2020
9	Mr. F. Parthiban	Best teacher award - TNJFU	2017
10	Mr. T.Ravikumar	Best Poster Presentation - National Seminar on Harmonizing Biodiversity and climate change challenges and opportunities CIARI, Port Blair (Co-author)	2017
		"Best Teacher Award" TNJFU	2017
		Appreciation certificate from TNJFU for Co-authored research paper DOI:10.1080/17583004.2017.1386534; 1-6. (NAAS Rate 8.09) (Co-author)	2017
		Appreciation certificate from TNJFU for Co-authored research Indian J. Fish., 64(4): 116-119, 2017	2017
		Best Book Award in the Fourth National Level Agricultural Scientific Tamil Society Conference	2018
		Certificate of Appreciation from Tamil Nadu State Aids Control Society and State Blood Transfusion council, Chennai for organizing Blood donation camp on 28.03.2019 at Fisheries College and Research Institute, Thoothukudi under NSS activities.	2019
11	Dr. R. Shalini	Best paper award at National Conference in Pondicherry	2017
		TNJFU Best Teacher award	2018
		2018TNJFU Appreciation award for externally funded project 2019	2019
12	Dr. B. Sivaraman	Best Poster Presentation in EIQASFISH'16 in 2016 conducted by Tamil Nadu Dr.J. Jayalalithaa Fisheries University	2016
		TNJFU Appreciation award for Technology developed on "Collagen peptides from fish bone by enzymatic hydrolysis" in 2018 by TNJFU	2018
		Prof. I. Karunasagar Gold Medal for Best outgoing Ph.D. student in Fish Quality Assurance and Management in 2019, by TNJFU	2019
13	Dr. G. Arul Oli	"Best Research Paper award in V International Conference on "Tamil Can Do" held at Fisheries College and Research	2020

		Institute, Thoothukudi on 10.11.2020	
14	Dr. T.Umamaheswari	Best paper award in the Second National Conference held at Tamil Nadu Agricultural University, Coimbatore during August 5-6, 2016 organized by TNAU	2016
		Best paper award in the Fourth National Conference held at IFPGS, Chennai during November 19-20, 2016 organized by TNJFU and Agricultural Scientific Tamil Society, New Delhi	2016

Award received by Students:

Sl. No.	Programme	Duration	Awards
1.	ROTARACE FEST 2016	30.01.2016	Students won II prize in group dance, I prize in short film, II prize for slide show and III prize for face painting competition; overall runner title
2.	Stecofest-2016	13.02.2016	Ms. Jane Jacob and Ms. Karthika Raju - II prize in quiz competition. Mr. N. Moulitharan - I prize in photography
3.	Tamil essay competition organised by Dinamani Newspaper and Neyveli Book Fair 2016	July 2016	Ms.T. Kalaiyarasi – I prize.
4.	Regional Asia South workshop organised by M/s. Evonik Pvt. Ltd., Singapore	16-07-2016	Mr. Jegan Michael Andro Jeevagan- won fellowship to represent at the Global workshop in Germany.
5.	Inter College State Level Valarum Sakthi Vallalar Gandhi Ilakkiya Parisu Competition conducted in Memorial of Dr.N. Mahalingam	06.08.2016	Ms. Benazir- Third Prize in Madurai Zonal level in Essay Competition
6.	Vigilance Department of V.O.C. Port Trust, Thoothukudi	03.11.2016	Ms.Jane Jacob- II prize in the elocution competition
7.	'PEGASUS 2016,organized by the Student's Association of Christian Medical College (CMC) Vellore	18.07.2016 – 23.07.2016	Mr.P. Dheeran- I prize

8.	District Level Teakwondo competition organized by Sports Development Authority of Tamil Nadu	22.11.2016	Ms.C. Sindhu – I prize Mr. Ponsrinivasan- I prize
9.	Poster presentation held at Kamaraj College, Thoothukudi	10.02.2017	Mr. P. Dheeran - III prize
10.	Second National Students Convention on "Innovative Approaches for Academic Excellence in Higher Education" conducted by Indian Council of Agricultural Research – Central Institute of Fisheries Education, Mumbai (ICAR-CIFE)	3.3.2017-5.3.2017	Mr.C.Jayapavithran- I prize in the poster presentation Ms.H. Benazir- III in Solo Dance
11.	30th Tamil Nadu State Teakwondo Championship	13.08.2017-15.08.2017	Ms. C. Sindhu - Bronze medal
12.	Tamil Nadu State Junior Wrestling Championship 2016-17	30.12.2017 & 31.12.2017	Ms.T. Jency- Bronze medal
13.	Agricultural Education Day	05.12.2017	Ms. Abisha - I prize Mr.Nandagopal - II prize Ms.Manimozhi and Mr.Arunkumar - III prize in elocution contest
14.	FISHNOVA 2018	19.01.2018	Mr.K.Manikandan and Mr.A.Gokulraj - I prize Mr.S.Sathish, Mr.R.Tamil Selvan and Mr.S.Babu Ganesh - II prize in science exhibits Ms.M.Muthu Abishag and Ms.Keerthiga - I prize. Mr.S.Sathish and Mr.R.Tamil Selvan – II prize in quiz competition
15.	18th All India Agricultural Sports and Games meet	30.01.2018-03.02.2018	K.Kanimozhi - 7th in Triple Jump S.A.Boscardin Wanika - 8th in Discus Throw event M.Tamilarasan- 8th in Long Jump
16.	4thInternational Day of Yoga	18.06.2018	V. Kalaiyarasan & G.Harini- I prize T.Ganesh Kumar & P.Anuba Sangari- II prize Nirav Borakhatariya & A.Kamali – III prize
17.	Gandhian Integrated Forum Trust organized an Inter-Collegiate State Level Competitions on Essay Writing and Poetry Writing on the eve of Birth	02.10.2018	Mr.T.Ganesh Kumar- III Prize in Poetry Writing

	Anniversary Celebrations of Mahatma Gandhi, Kasturi Ba, Acharya Vinoba Bhave and Didi Nirmala Deshpande		
18.	Rotary Youth leadership Awards 2018 (RYLA 2018)	26.10.2018 – 28.10.2018	Mr. E.Sakthivel- Best Rylarian 2018 (Boys) Miss. M.Semeena - Best Rylarian 2018 (Girls)
19.	The SHOAL 2018	14.12.2018 & 15.12.2018	Runners title by participating in Light Vocal Solo / Gazal (Non-Film Songs), Group Singing, Extempore speech, Debate, Quiz, Rangoli, Clay modelling, Group Dance – Folk, Mime, Collage, Chart Painting and Carton Drawing, swimming, badminton shuttle, table tennis and Chess
20.	PONFIMA 2019- one day sports competition programme & Intercollegiate competition programme	21.03.2019-22.03.2019	Students won the overall championship PONFIMA 2019
21.	3rd Student Convention at ICAR-CIFE, Mumbai	25.03.2019-26.03.2019	Mr. R. Tamilselvan- II Best Presentation and “Cash Award” of Rs.3,000/-
22.	COFIESTA 2019 - Intercollegiate cultural and Quiz competition programme	11.04.2019	Students won the overall championship “COFIESTA 2019
23.	JAYCEE WEEK 2019	02.08.2019	R. Leeban, S.K. Naveen (III prize), T. Ganesh Kumar (I Prize), K. Vasantha Kumaran, M. Vishal (II prize), B. Selvarani (I prize), S. Ajaykumar (I prize), U. Gokula Krishnan won the prizes in competitive events which included Quiz Tamil, Paper Presentation, Group discussion and cloth painting.

6.5.7.4 Employability:

The students are given the skill development classes for English proficiency, inter and intra personal communication, public speaking, presentation skills and scientific writing. Every Thursday, special programmes on personality development are being arranged for the benefit of students. Students are also trained for facing the interview and gain employment

through campus interview programme. They are given mock examination for appearing in ICAR – JRF and other competitive examinations.

The students are given career guidance through placement Cell, Student Coordinators and Counsellors for getting suitable placement. Every year campus interviews are arranged in the College premises for selecting the interested candidates.

During the Students' READY programme, the final year students are being provided with hands on training in ornamental fish farming, freshwater fish farming, mariculture, pond preparation, seed purchase and stocking, live feed culture feed preparation, water quality management, disease management, fish processing, fishery products preparation, quality assurance and fishing technology are given for period of six under Experiential Learning Programmes (ELP) at campus. Besides, hands on training and practical exposure on fish processing, microbiological laboratory techniques, brood stock maintenance, hatchery techniques, culture techniques and marketing techniques are also given for another six months under In-Plant attachment programmes.

The students are trained to acquire start-up grants through bank loans for becoming fisheries entrepreneurs. They are also trained to prepare the successful bankable projects for obtaining the loans. The status and welfare of passed out students are monitored and required guidance are given by the staff of this Institute.

6.5.8. SSR of the College must have the SSR of all its Degree Programmes (following section 6.4), then the report of the Colleges shall be considered.

6.5.9. Certificate (Applicable when SSR is submitted for Programmes & College).

I, the Dean in-charge, **Dr.N. V. SUJATHKUMAR,** hereby certify that the information contained in Sections 6.4 and Section 6.5.1 to 6.5.7.4 are furnished as per the records available in the college and degree awarding university.



Signature of Dean of the college with Date & Seal

ANNEXURE –I

FACULTY PROFILE

Dean Office

Dr. N.V. Sujathkumar, Dean in-charge

Department of Aquaculture

1. Dr.S.Athithan, Professor and Head, Department of Aquaculture
2. Dr. J.Jaculine Pereira, Assistant Professor
3. Dr. Vijay Amirtharaj, Assistant Professor
4. Dr. C. Judith Betsy, Assistant Professor
5. Mr. A. Anix Vivek Santhiya, Assistant Professor

Department of Fisheries Biology and Resource Management

1. Dr. Durairaj, Assistant Professor
2. Mr. C. Sudhan, Assistant Professor

Department of Fish Pathology and Health Management

1. Dr. B. Chrisolite, Assistant Professor
2. Dr. Ranjeeta Kumari, Assistant Professor
3. Dr. Sivasankar, Assistant Professor

Department of Aquatic Environment Management

1. Dr. P. Padmavathy, Professor and Head
2. Dr. V. Rani, Associate Professor
3. Mrs. D. Manimekalai, Assistant Professor
4. Mr. S. Manikavasagam, Assistant Professor

Department of Fish Processing Technology

1. Dr. P. Ganesan, Assistant Professor
2. Mr. M. Muruganantham, Assistant Professor
3. Mr. F. Parthiban, Assistant Professor

Department of Fishing Technology and Fisheries Engineering

1. Mr. T. Ravikumar, Assistant Professor and Head
2. Mr. S. Mariappan, Assistant Professor

Department of Fish Quality Assurance and Management

1. Dr. R. Jeyashakila, Professor and Head
2. Dr. R. Shalini, Assistant Professor
3. Dr. B. Sivaraman, Assistant Professor

Department of Fisheries Extension, Economics and Statistics

1. Dr. R. Santhakumar, Professor and Head
2. Dr. G. Arul Oli, Assistant Professor
3. Dr. T. Uma Maheshwari, Assistant Professor

Name **: N.V.Sujathkumar**

Designation : Professor and Head

Email : sujathkumar@tnfu.ac.in

Qualification : B.F.Sc., M.Sc (Ag)., Ph.D.

Additional Qualification : --

Field of Specialization : Fisheries Extension, ICT

Experience (in years) : 32

Completed projects and Ongoing Projects :

Sl. No.	Title of the Project	Year	PI & Co-PI of the Project	Funds (in Rs)	Funding Agency
1	'E-fish Health Surveillance and Monitoring Network to improve fisheries production in Tamil Nadu'	2017-20	Co-PI	5,90,40,000	TANII

Publication details (From 2016)

No. of papers published in National Journal - 7

No. of papers published in International Journal - 4

Honours and Awards (from 2016)

Patents filled --

Professional licensure and certification (If any): --

Name : **Dr. S. Athithan**

Designation : Professor & Head

Email : athithan@tnfu.ac.in

Qualification : M.F.Sc., Ph.D.

Additional Qualification : -

Field of Specialization : Fish Nutrition / Seaweed Farming / Crab & Lobster Fattening

Experience (in years) : 25 years

Completed projects and Ongoing Projects :

Sl. No.	Title of the Project	Year	PI & Co-PI of the Project	Funds (in Rs)	Funding Agency
1	Testing of a floating solar platform deployed off the coast of Tharuvaikulam to generate solar energy and freshwater for the benefit of the coastal communities under Institute – Industry Project	2 Years 2019 & 2021	Principal Investigator	5.336 lakhs	Sea6 Energy Bangalore
2	Setting up of cage culture unit for Lobster Fattening in the open sea under Institution - Progressive farmer tie up method	5 Years 2013 to 2018	Principal Investigator	6.35 lakhs	TNFU

Publication details (From 2016)

No. of papers published in National Journal - 15

No. of papers published in International Journal - Nil

Honours and Awards (from 2016)

Honours and Awards (Including patents)

1	Distinguished Scientist Award in the field of Fish Nutrition by Venus International Foundation, Chennai, Tamil Nadu on 03.12.2016
2	Best Professor Award in the field of Coastal Aquaculture by Pearl Foundation, Madurai, Tamil Nadu on 10.12.2016
3	Best Researcher Award by Education Expo TV's (Research Wing for Excellence in Professional Education & Industry) New Delhi on 12.02.2017
4	Best Innovative Extension Worker Award (2017) By Society for Advancement of Agricultural Innovations (SAAI), Innovative Farming Journal, Khowai- 799201, Tripuraon 12.01.2018.
5	Outstanding Teacher Award SOCIETY FOR BIOTIC AND ENVIRONMENTAL RESEARCH (SBER) (A Scientific Society Registered under SRA 1860) Regd. No. 8067 of 2019, NITI Aayog ID No. TR/2019/0229149, Khowai, Tripura - 799201, INDIA On 15.10.2020 for Commendable Contribution in the Field of Aquaculture Covering Teaching, Research & Extension Activities

Patents filled - Nil

Professional licensure and certification (If any) - Nil

Name	: **Dr. J.Jaculine Pereira**
Designation	: Assistant Professor
Email	: jaculine@tnfu.ac.in
Qualification	: M.F.Sc., M.Phil., Ph.D.,
Additional Qualification	: NET
Field of Specialization	: Fisheries Biotechnology
Experience (in years)	: 13
Completed projects and Ongoing Projects	: Nil

Publication details (From 2016)
No. of papers published in National Journal - 3
No. of papers published in International Journal - 3

Honours and Awards (from 2016)

Patents filled

Professional licensure and certification (If any)

Name : **K.S.Vijay Amirtharaj**

Designation : Assistant Professor and Head i/c

Email : vijayamirtharaj@tnfu.ac.in

Qualification : M.F.Sc

Additional Qualification : -

Field of Specialization : Aquaculture

Experience (in years) : 10 years and 8 months

Completed projects and Ongoing Projects :

Sl. No.	Title of the Project	Year	PI & Co-PI of the Project	Funds (in Rs)	Funding Agency
1	Testing of a floating solar platform deployed off the coast of Tharuvaikulam to generate solar energy and freshwater for the benefit of coastal communities.	2017	As Co-PI	5.3	Industry (Sea6 Energy)
2	Demonstration farming of vannamei in lined ponds at MRFF, Tharuvaikulam	2018	As PI	2.5 Lakhs	TNJFU
3	Open sea cage culture of finfishes along the coast of Ramanathapuram District in Tamil Nadu	2018	As Co-PI	277.6 Lakhs	NFDB
4	Effect of seaweed based product as feed additive on growth performance and feed utilization in pacific white shrimp *Penaeus vannamei.*	2019	As PI	5.6 Lakhs	Industry (Sea6 Energy)
5	Integrated Multi-Tropic Aquaculture (IMTA) Based Culture Technology to Augment Fish Production as an Alternative Livelihood for the Fisherfolk of Tharuvaikulam, Tamil Nadu	2020	As PI	299.6 Lakhs	NADP

Publication details (From 2016)
No. of papers published in National Journal - 3
No. of papers published in International Journal - 6
Honours and Awards (from 2016)
Patents filled
Professional licensure and certification (If any)

Name : **Dr. C. Judith Betsy**

Designation : Assistant Professor

Email : betsy@tnfu.ac.in

Qualification : M.F.Sc., Ph.D.

Additional Qualification : -

Field of Specialization : Aquaculture

Experience (in years) : 3 years and 7 months

Completed projects and Ongoing Projects :

Sl. No.	Title of the Project	Year	PI & Co-PI of the Project	Funds (in Rs)	Funding Agency
1.	Studies on the nutritional factors influencing gamete quality and artificial fertilization in Koi carp	2019	PI	2 lakhs	TNJFU
2.	University Revolving Fund Scheme on Conduct of Demonstration Culture Units of Pangassius, Vannamei, Scampi and GIFT Tilapia	2017	PI	5 lakhs	TNJFU
3.	Pureline broodstock development for cultivable fishes	2017	Co-PI	50 lakhs	World Bank – Govt of TN

Publication details (From 2016)
No. of papers published in National Journal - 10
No. of papers published in International Journal - 3

Honours and Awards (from 2016)

Sl. No.	Distinction/ Prizes/ Medals/ Awards/ Honours	Awarded by	Period	Purpose
1.	TNFU Gold Medal	TNJFU	2013-2017	University first rank in Ph.D.
2.	Dr. T. M. Samocha Gold Medal	TNJFU	2013-2017	Best thesis in Ph.D.

Patents filled - NIL

Professional licensure and certification (If any)- NIL

Name : **A. Anix Vivek Santhiya**

Designation : Assistant Professor

Email : anix@tnfu.c.in

Qualification : M.F.Sc.

Additional Qualification : NET

Field of Specialization : Aquaculture

Experience (in years) : Three and Half years

Completed projects and Ongoing Projects :

Sl. No.	Title of the Project	Year	PI & Co- PI of the Project	Funds (in Rs)	Funding Agency
1	Establishment of Aquatic Rainbow Technology (Ornamental Fish) Park	2017-18	Co-PI	1033 Lks.	State Innovation Fund (TANII)
2	Open sea cage culture on finfishes along the coast of Ramanathapuram District in Tamil Nadu	2018-20	Co-PI	277.60 Lks.	NFDB
3	Integrated Multi-Tropic Aquaculture (IMTA) Based Culture Technology to Augment Fish Production as an Alternative Livelihood for the Fisher folk at MRFF, Tharuvaikulam	2019-21	Co-PI	299.568 Lks.	NADP

Publication details (From 2016)

No. of papers published in National Journal – 7

No. of papers published in International Journal – 2

Honours and Awards (from 2016): Nil

Patents filled: Nil

Professional licensure and certification (If any): Nil

Name : **R. Durairaja**

Designation : Assistant Professor

Email : durairaja@tnfu.ac.in

Qualification : Master of Fisheries Science

Additional Qualification Discipline : Undergoing Part-time Ph.D. in FRM

Field of Specialization : Fisheries Biology and Resource Management

Experience (in years) : 5 ½ years

Completed projects and Ongoing Projects : Completed UR projects 03

Sl. No.	Title of the Project	Year	PI & Co- PI of the Project	Funds (in Rs)	Funding Agency
1.	University Research project on "Biology of Mullet from Pulicat lake, Chennai"	2016	R. Durairaja	--	TNJFU
2.	University Research project on "Reproductive biology of the spotted scat *Scatophagus argus* (Linnaeus, 1766) from Tiruvallur and Chennai coast"	2017	R. Durairaja	--	TNJFU
3.	University Research project on "Comparative skeletal osteology of anchovies (*Stolephorus* sp)" off Thoothukudi coast"	2019	R. Durairaja	--	TNJFU

Publication details (From 2016)
No. of papers published in National Journal – 5
No. of papers published in International Journal - 3

Honours and Awards (from 2016)

Patents filled - Nil

Professional licensure and certification (If any) – Nil

Name : **Mr. C. Sudhan**

Designation : Assistant Professor

Email : sudhancphd@gmail.com

Qualification : M.F.Sc. (Fisheries Resource Management)

Additional Qualification : --

Field of Specialization : Fisheries Resource Management

Experience (in years) : 1 Month 5 days (as on 31.03.2021)

Completed projects and Ongoing Projects :

Sl. No.	Title of the Project	Year	PI & Co- PI of the Project	Funds (in Rs)	Funding Agency
Completed project : 01					
1	Sea turtle nesting ground identification and its conservation status along southern Tamil Nadu	2017	C. Sudhan, (Small Grantee under Dr. E.G.Silas Grant) G. Sugumar, S. David Kingston & P. Jawahar (Special Referee)	20,000	MBAI, Kochi
On-going project : 0					

Publication details (From 2015)
No. of papers published in National Journal : 6
No. of papers published in International Journal : 12

Honours and Awards (from 2016)

- SRTP-Intern 2020, CSIR-NEIST, Jorhat
- Best Poster Award 2019, United Way of Mumbai
- YPRF Diversity Scholarship Winner 2019, American Elasmobranch Society
- Dr. Rajagopalan Award Gold Medal 2017, TNJFU, Nagapattinam

Patents filled : --
Professional licensure and certification (If any) : --

Name	: **Dr. B. Chrisolite**
Designation	: Assistant Professor
Address	: Department of Fish Pathology and Health Management
Contact	
Mobile	: 09486088410
Email	: chrisolite@tnfu.ac.in
Qualification	: M.F.Sc., PhD.
Field of Specialization	: Fish Processing Technology
Major	: Fisheries Microbiology
Specializing field	: Fisheries Microbiology
Experience (in years)	: Ten years
Completed projects	:

Sl. No.	Title of the Project	Year	PI & Co-PI of the Project	Funds (in Rs)	Funding Agency
1	National Surveillance Programme for Aquatic Animal Disease	Five till 2018	Co-PI	80.43	NFDB
2	Seasonal variation in the lipid and fatty acid profile of sardine (*Sardinella gibbosa*) and emperor fish (*Lethrinus lentjan*) from Thoothukudi coast	2014-2016	PI	-	TNFU

Research publications

No. of papers published in National Journal – 15
No. of papers published in International Journal - 2

Honours and Awards

- Sathish Kumar, K., **Chrisolite, B.,** Sugumar, G., Bindu, J. and Venkateshwarlu, G. 2018 Best Scientific paper award for the paper entitled "Shelf life extension of Tuna fillets by Gelatin and Chitosan based edible coating incorporated with clove oil" that appeared in Volume 55, No. 2 of the Fishery Technology journal by the Society of Fisheries Technologists on 02.08.2019.

Name	: **RANJEETAKUMARI**
Designation	: Assistant Professor
Address	: Department of Fish Pathology & Health Management,
Contact	
Telephone(O)	:
Telephone(R)	:
Mobile	: +91-9791571594,+91-7738040345
Email	:ranjeeta.cife27@gmail.com
Qualification	:M.F.Sc.
Field of Specialization	:
Major	: Fish Health
Specializing field	: Fish Immunology
Experience(in years)	: 10 months
Current projects	:
Completed projects	:
Research publications (max–10)	:

Honours and Awards (Includingpatents)

- Received **Best Presentation Award** for paper "Evaluation of Two DNA Vaccine Constructs in *Labeorohita* against *Edwardsiellatarda*" in 19th International Conference on Molecular Virology and Microbiology held at Bangkok, Thailand.

Name :**Dr.P.SIVASANKAR**

Designation : Assistant Professor

Email : shivsankar@tnfu.ac.in

Qualification :Ph.D.,

Additional Qualification : --

Field of Specialization : Fish Diseases and Health Management

Experience (in years) : 1 year and 11 Months (as on 01.09.2021)

Completed projects and On-going Projects : On-going projects - 3 Nos. (As Co-investigator)

Sl. No.	**Title of the Project**	**Year**	**PI & Co-PI**	**Budget (Rs. in lakh)**	**Funding Agency**
1.	Open Sea Cage Culture of Marine Finfishes along the coast of Ramanathapuram District in Tamil Nadu	2019	PI Dr. C.Anand Assistant Professor and Head i/c Co-PI Dr.P.Sivasankar Assistant Professor	277.6 lakhs	NFDB
2.	Development and Transfer of Seaweed Farming Technology as an Alternative Employment Option for the Coastal Fisher folk in Mandapam Region of Tamil Nadu	2019	PI Dr. C.Anand Assistant Professor and Head i/c Co-PI Dr.P.Sivasankar Assistant Professor	251.1 lakhs	NADP
3.	Upgrading Sustainable Aquaculture Production Centres of TNJFU for Operation through Private-Public Partnership for Integrated Agriculture Development	2020	PI Dr. J. Stephen Sampathkumar Director of CeSA Co-PI Dr.P.Sivasankar Assistant Professor	378.0 lakhs	NADP

Publication details (From 2016)

No. of papers published in National Journal: 4

No. of papers published in International Journal: 2

Honours and Awards (from 2016)

1. Rajiv Gandhi National Fellowship for studying PhD - **University Grants Commission for the year of 2014-2015 (Periods 2014 - 2018)**.
2. Detection and isolation of Rhabdo virus from snakehead experiencing mortality with surface ulceration. Won **Best paper presentation award - The 11th Indian fisheries and aquaculture Forum, ICAR-CIFT, Cochin, India during 2017.**

Patents filled : --

Professional licensure and certification (If any) : --

Name	: **Dr.P.Padmavathy**
Designation	: Professor & Head
Email	: padmavathy@tnfu.ac.in
Qualification	: MFSc., Ph.D.
Additional Qualification	: -
Field of Specialization	: Aquatic Environment Management
Experience (in years)	: 16

Completed projects : **3**

Publication details (From 2016)

No. of papers published in National Journal – 21
No. of papers published in International Journal - Nil

Honours and Awards (from 2016) : nil

Patents filled : -

Professional licensure and certification (If any): -

Name : **Dr.V.Rani**

Designation : Associate Professor

Email : rani@tnfu.ac.in

Qualification : MFSc., Ph.D.

Additional Qualification : -

Field of Specialization : Aquatic Environment Management

Experience (in years) : 15

Completed projects and Ongoing Projects : 1

Sl. No.	Title of the Project	Year	PI & Co-PI of the Project	Funds (in Rs)	Funding Agency
1	Production of Eicosapentaenoic acid (EPA) from marine diatom *Phaeodactylum tricornutum* isolated from the coastal waters of Gulf of Mannar	2019-22	PI	Rs. 41.85 lakhs	DST – (SERB), New Delhi

Publication details (From 2016)

No. of papers published in National Journal – 4

No. of papers published in International Journal - Nil

Honours and Awards (from 2016) : 3

1. **Best Paper award** for the presentation of the research topic on" Influence of species, geographic location, seasonal variation and extraction method on the fucoidan yield of the brown seaweeds of Gulf of Mannar, India" at the third National Conference on Agricultural Scientific Research held at TNAU, Coimbatore during 12.08.2017 to 13.08.2017
2. Conferred with "**Young Professional Award**" by Agricultural Scientific Tamil Society, New Delhi during 5th National conference on "Agricultural Scientific Tamil Conference" at Tamil Nadu Agricultural University, Coimbatore on 09.10.2020.
3. Conferred with **"Best Book Award"** by Agricultural Scientific Tamil Society, New Delhi during 5th National conference on "Agricultural Scientific Tamil Conference" at Tamil Nadu Agricultural University, Coimbatore on 09.10.2020

Patents filled : -

Professional licensure and certification (If any): -

Name	: **D. Manimekalai**
Designation	: Assistant Professor
Email	: manimekalai@tnfu.ac.in
Qualification	: M.F.Sc.
Additional Qualification	: ---
Field of Specialization	: Aquatic Environment Management
Experience (in years)	: 9 years
Completed projects and Ongoing Projects	:

Publication details (From 2016)

No. of papers published in National Journal : 8

No. of papers published in International Journal : 1

Honours and Awards (from 2016)

- Awarded Best Paper Presentation during 6th National Tamil Conference 2021 on 22.12.2020

Patents filled: --

Professional licensure and certification (If any)

Name : **Mr. MANICKAVASAGAM. S**

Designation : Assistant Professor

Email : manickavasagam.1994@gmail.com

Qualification : M.F.Sc. (Aquatic Environment Management)

Additional Qualification : NIL

Field of Specialization : Aquatic Environment Management

Experience (in years) :

S.NO	POST HELD	WORKED ORGANISATION	DURATION
1	Senior Research Fellow	ICAR-CIFE, Mumbai	5 Months
2	Project Scientist 'B'	INCOIS, Hyderabad	2 Years
3	Assistant Professor	TNJFU, Nagapattinam	16 Days (As on 31.03.2021)

Completed projects and Ongoing Projects : NIL

Publication details (From 2015)
No. of papers published in National Journal: **3**
No. of papers published in International Journal: **3**

Honours and Awards (from 2016)

Patents filed : **Design of a prototype of double compartment device for micro- and macroplastic entrapment from flowing water"** for protecting the rights of the prototype developed for plastic entrapment from flowing water.

Professional licensure and certification (If any) : --

Name : **Dr. P. Ganesan**

Designation : Assistant Professor

Email : ganesan@tnfu.ac.in

Qualification : Ph.D.

Additional Qualification :

Field of Specialization : Fish Processing Technology

Experience (in years) : 10 years and 9 months

Completed projects and Ongoing Projects : 13 Nos

Sl. No.	Title of the Project	Year	PI & Co-PI of the Project	Funds (Rs in Lakhs)	Funding Agency
1	Establishment of Marine Products Incubation Centre serving as Principal Investigator	2019	PI	250	(EDII), Chennai
2	Appraisal of marine fish landings of Tamil Nadu serving as Co-Principal Investigator	2018	Co- PI	8.33	Waterbase Limited, Chennai
3	Fisheries management for sustainable livelihood serving as Co-Principal Investigator	2016	Co- PI	1.05	FIMSUL-II
4	Hygienic handling and management practices of fishing harbour and landing centre serving as Co-Principal Investigator	2016	Co- PI	10.32	FIMSUL-II

Publication details (From 2016)
No. of papers published in National Journal - 3
No. of papers published in International Journal - 6

Honours and Awards (from 2016)

Awarded with Fellow Membership FWRA by World Researchers Associations for outstanding recognition of achievements and for promotion of research and environment. (Dated, May 21, 2019)

Patents filled

Professional licensure and certification (If any)

Name : **Mr. M. Muruganantham**

Designation : Assistant Professor

Email : muruganantham@tnfu.ac.in

Qualification : M.F.Sc.

Additional Qualification : ICAR NET Passed

Field of Specialization : Industrial Fish Processing Technology

Experience (in years) : 11 years in fish processing field, 13 years in Research and 9 years in teaching

Completed projects and Ongoing Projects :

Sl. No.	Title of the Project	Year	PI & Co-PI of the Project	Funds (in Rs)	Funding Agency
1.	Development of halophyte incorporated fish products using *Salicornia brachiata Roxb*	2019	PI	0.35	TNJFU

Publication details (From 2016)
No. of papers published in National Journal - 4
No. of papers published in International Journal -

Honours and Awards(from 2016)

1. Best Teacher Award for the year 2017 from TNJFU

2. Best Paper Presentation Award during 5th ASTS Conference – Fisheries Technical session

Patents filled : Nil

Professional licensure and certification (If any) : Nil

Name :**Mr. F. Parthiban**

Designation : Assistant Professor

Email : parthiban@tnfu.ac.in

Qualification : M.F.Sc

Additional Qualification :-

Field of Specialization : Fish Post harvest Technology

Experience (in years) : 16 Years (10 year industrial+6 year academic)

Completed projects and Ongoing Projects :

Sl. No.	Title of the Project	Year	PI & Co-PI of the Project	Funds (in Rs)	Funding Agency
1	"Kayalagam – The Future Store for Amplification of Marketing of Diversified Fish Products in Tamil Nadu'	2019-2021	Co-PI	Rs. 250 lakhs	NADP
2	Establishment of Marine Products business incubation forum in Tamil Nadu	2019-2021	Co-PI	Rs. 250 lakhs	EDII
3	Tilapia Entrepreneurial Park Development for Industrialization of Tilapia Culture in Palar Porandalar Dam (Dindigul Dt.).	2020-2022	Co-PI	Rs. 344.5 lakhs	TANII

Publication details (From 2016)

No. of papers published in National Journal - 5

No. of papers published in International Journal – 1

Honours and Awards (from 2016)

1. Best teacher award - 2017

Patents filled

Professional licensure and certification (If any)

Name : **Mr.T.Ravikumar**

Designation : Assistant Professor and Head

E mail : Ravikumar@tnfu.ac.in

Qualification : M.F.Sc.,

Additional Qualification : -

Field of Specialisation : Fishing Technology and Fisheries Engineering

Experience (in years) : 6 years and 5 months

Current Projects:

S.No.	Title of the project	Year	PI and Co-PI of the Project	Funds	Funding Agency
1	Assessment of CO2 emission from motorized fishing vessels of Thoothukudi Coast	2019	PI	URP	TNJFU
2	"Evolving artificial fish baits for long line fishing from fish processing wastes to reduce the forage fish depletion"	2018-21	Co-PI	44.56 lakhs	DBT
3	Establishment of Deepsea Fishing Technology Training and Management centre at Thoothukudi and Thoothoor	2019-21	Co-PI	382 lakhs	Tamil Nadu Govt.

Completed Projects:

S.No.	Title of the project	Year	PI and Co-PI of the Project	Funds (Rs)	Funding Agency
1	Comparison of TNFU squid jigging Platform with ITK Squid Jigging"	2016-17	PI	-	TNFU
2	"Assessment of fishing pattern and fishing pressure in Gulf of Mannar Coast"	2017-18	Co-PI	21,00,000	Climate Adoption Funds, Government of Tamil Nadu.
3	As Investigator, Under FIMSUL II project on "Hygienic Handling and Management Practices of Fishing Harbour and Landing centre" for	2019	Investigator	10,32,000/-	

Publications

No. of papers published in National Journal: 14
No. of papers published in International Journal: 03

Honours and Award (From 2016)

1. Best Poster Presentation – "Price analysis of marine and freshwater fishes in North and Middle Andaman District – India", National Seminar on Harmonizing Biodiversity and climate change challenges and opportunities CIARI, Port Blair (Co-author)

2. Received "Best Teacher Award" during republic day eve on 26/01/2017 at FC&RI, Thoothukudi.

3. Appreciation certificate from TNJFU for Co-authored research paper - J.Amala Shajeeva, N. Neethiselvan, B.Sundaramoorthy, K.Masilan, D.Arunjenish, M.Rajakumar, T.Ravikumar & V.Baiju 2017 Carbon emission due to excess fuel consumption by the trawlers of Thoothukudi, Southeast Coast of India. Carbon Management, DOI:10.1080/17583004.2017.1386534; 1-6. (NAAS Rate 8.09) (Co-author)

4. Appreciation certificate from TNJFU for Co-authored research paper - Arunjenish. D, N. Neethiselvan,B. Sundaramoorthy, P. Jawahar and T. Ravikumar. 2017. Comparative efficiency of fish trap with different funnel designs. Indian J. Fish., 64(4): 116-119, 2017

5. Best Book Award for the Co-authored book **Let's Get Ready for Deepsea Fishing** (ஆழ்கடல் மீன்பிடிப்பிற்கு ஆயத்தமாவோம்) in the Fourth National Level Agricultural Scientific Tamil Society Conference held at IPGS, Vanianchavadi, Chennai from 19.11.2018 &20.11.2018

6. Received certificate of Appreciation from Tamil Nadu state Aids Control Society and State Blood Transfusion council, Chennai for organizing Blood donation camp on 28.03.2019 at Fisheries College and Research Institute, Thoothukudi under NSS activities.

Patent filed: -

Professional Licensure and certification: -

Name : **Mr.S.MARIAPPAN**

Designation : Assistant Professor

Email : mariappan@tnfu.ac.in

Qualification : M.F.Sc.

Additional Qualification : --

Field of Specialization : Fishing Technology and Fisheries Engineering

Experience (in years) : 1 Month and 3 days(as on 31.03.2021)

Completed projects and On-going Projects : Nil

Publication details (From 2016)

No. of papers published in National Journal: 04

No. of papers published in International Journal: --

Honours and Awards (from 2016)

1. Received "Best Teaching Assistant Award" awarded by Tamil Nadu Dr. J. Jayalalithaa Fisheries University

Patents filled : --

Professional licensure and certification (If any) : --

Name : **Dr. R. Jeya Shakila**

Designation : Professor and Head

: Department of Fish Quality Assurance and Management

FC& RI, Thoothukudi

Email : jeyashakila@tnfu.ac.in

Qualification : Ph. D (Food Science)

Additional Qualification : --

Field of specialization : Fish Quality Assurance and Management

Experience (in years) : Twenty One years

Completed and Current projects : (Please provide max 5)

Sl. No.	Title of the Project	Year	PI of the Project	Funds (in Rs)	Funding Agency
1	Bioactive peptides from fish protein hydrolysates produced using endogenous proteinases from fish processing wastes	2013-16	Dr. R. Jeya Shakila	Rs. 39.98 lakh	DST
2	Quality analysis of fish samples	2012 to till date	Dr. R. Jeya Shakila		University Self Financing Scheme
3	Bio-Prospecting for anti-osteoporotic collagen peptides derived from fish bones	2017-2020-	Dr. R. Jeya Shakila	Rs. 57 lakhs	DBT

Publication details

1. Number of papers published in National Journals: 75 Nos
2. Number of papers published in International Journals: 42 Nos

Name : **Dr.R. Shalini**

Designation :Assistant Professor

:Department of Fish Quality Assurance and Management

FC& RI, Thoothukudi

Email :shalini@tnfu.ac.in

Qualification : Ph.D. (Fish Quality Assurance and Management)

Additional Qualification : --

Field of specialization : Fish Quality Assurance and Management

Experience (in years) : Eight years

Completed and Current projects : (Please provide max 5)

Sl.No.	Title of the Project	Year	PI & Co- PI of the Project	Funds (in Rs)	Funding Agency
1	Monitoring of heavy metal in the finfish and shellfish species along the Indian coast and possible mitigation measures	2018-20	PI- Dr. Satyen Panda(CIFT, Cochin) Co-PI- R. Shalini	Rs. 9.52 lakh	FSSAI

Publication details (From 2016)

1. Number of papers published in National Journals: 5
2. Number of papers published in International Journals: 7

Awards

1. Best paper award at National Conference in Pondicherry
2. TNJFU Best Teacher award 2018
3. TNJFU Appreciation award for externally funded project 2019

Name : **Dr.B. Sivaraman**

Designation : Assistant Professor, DFQAM

Email : sivaraman@tnfu.ac.in

Qualification : PhD in Fish Quality Assurance and Management

Additional Qualification : M.Sc. Bioinformatics

Field of Specialization : Fish Quality Assurance and Management

Experience (in years) : 1 year three months

Completed projects and Ongoing Projects : Nil

Publication details (From 2016)

No. of papers published in National Journal – 4

No. of papers published in International Journal - 10

Honours and Awards (from 2016)

1. Prof. I. Karunasagar Gold Medal for Best outgoing Ph.D. student in Fish Quality Assurance and Management in 2019, by Tamil Nadu Dr.J. Jayalalithaa Fisheries University
2. TNJFU Appreciation award for Technology developed on "Collagen peptides from fish bone by enzymatic hydrolysis" in 2018 by Tamil Nadu Dr.J. Jayalalithaa Fisheries University
3. Best Poster Presentation in EIQASFISH'16 in 2016 conducted by Tamil Nadu Dr.J. Jayalalithaa Fisheries University

Patents filled

B. Sivaraman, G. Jeyasekaran, R. Jeya Shakila, 2018. Designing of genus specific Primer for Lutjanus from 16s rRNA mitochondrial region for authentication of snapper products by single step PCR. (Patent Application No.: 201841026977; Filed on 19.07.2018)

Professional licensure and certification (If any) : Nil

Name : **Dr.R.SANTHAKUMAR**

Designation : Professor and Head

Email : santhakumar@tnfu.ac.in

Qualification : B.F.Sc., M.Sc. (Ag)., Ph.D.

Additional Qualification : --

Field of Specialization : Fisheries Extension

Experience (in years) : 31 Years

Completed projects and Ongoing Projects : Completed-2

Sl. No.	Title of the Project	Year	PI & Co- PI of the Project	Funds (in Rs)	Funding Agency
1	Converting low value fish marketing to high value fish marketing among the marginalized fisherwomen in the coastal districts of Tamil Nadu	2014-2016	Tmt.C.Jeevitha-Director Dr.Santhakumar-Co-Director	8.00 lakhs	ICSSR, New Delhi

Publication details (From 2016)

No. of papers published in National Journal - 10

No. of papers published in International Journal - Nil

Honours and Awards (from 2016) :Nil

Patents filled :Nil

Professional licensure and certification (If any) :Nil

Name : **Dr.G.Arul Oli**

Designation : Assistant Professor

Email : aruloli@tnfu.ac.in

Qualification : M.F.Sc. Ph.D.

Additional Qualification : --

Field of Specialization : Fisheries Extension

Experience (in years) : 12 Years 3 Months (as on 29.01.2021)

Completed projects and Ongoing Projects :

Sl. No.	Title of the Project	Year	PI & Co- PI of the Project	Funds (in Rs)	Funding Agency
Completed project : 01					
1	Participatory adoption on gender specific fish farming technologies in Public/Panchayat tanks in Tirunelveli Districts	2017	Dr.G.Arul Oli, Assistant Professor As PI and Mr.K.S.Vijay Amirtharaj, Assistant Professor As Co-PI	2.15 Lakhs	TANUVAS Research CORPUS FUND
2	Effect of Seaweed based product as feed additive on growth performance and feed utilization in pacific white shrimp Peaneus Vannamei"	2020	Mr.K.S.Vijay Amirtharaj, Assistant Professor As PI and Dr.G.Arul Oli Assistant Professor As Co-PI	5.00 Lakhs	Sea 6 Energy, Bangalore
On-going project : 01					
1	Integrated Multi-trophic Aquaculture (IMTA) based	2020	Mr.K.S.Vijay Amirtharaj,	299.6	NADP

	culture technology to augment fish production as an alternative livelihood for the fisherfolk of Tharuvaikulam, Tamil Nadu		Assistant Professor As PI and Dr.G.Arul Oli Assistant Professor As Co-PI	Lakhs	

Publication details (From 2016)

No. of papers published in National Journal : 06

No. of papers published in International Journal : --

Honours and Awards (from 2016)

1. Received "Best Research Paper award in V International Conference on "Tamil Can Do" held at Fisheries College and Research Institute, Thoothukudi on 10.11.2020

Patents filled : --

Professional licensure and certification (If any) : --

Name : **Dr. T. Umamaheswari**

Designation : Assistant Professor

Email : umamaheshwari@tnfu.ac.in

Qualification : Ph.D.

Additional Qualification : --

Field of Specialization : Fisheries Economics

Experience (in years) : 9

Completed projects and Ongoing Projects :

Sl. No.	Title of the Project	Year	PI & Co- PI of the Project	Funds (in Rs)	Funding Agency
1.	Value chain analysis of farmed shrimp in Tamil Nadu	2016-17	**PI:** Dr.T.Umamaheswari **Co-PI:** Dr.M.Rajakumar	12.0 lakhs	ICAR Extramural, New Delhi
2.	Sustainable Exploitation of Fisheries Resources through co-Management in Kombuthurai fishing village	2016-17	**Project Supervisor:** Dr.G.Sugumar **PI:** Dr.B.Sundaramoorthi, Dr.P.Jawahar and Dr. T.Umamaheswari	4.98 lakhs	FIMSUL-II, Fisheries Department, GoTN, Chennai
3.	Socio-economic vulnerability of fishermen and other coastal communities in Thoothukudi district of Tamil Nadu	2017-18	**Project Supervisor:** Dr.G.Sugumar **PI:** Dr. T.Umamaheswari	5.82 lakhs	Department of Environment, Chennai under NAFCC fund

Publication details (From 2016)

No. of papers published in National Journal - 10

No. of papers published in International Journal - 1

Honours and Awards (from 2016)

1. **Best paper award** in the First National Conference held at Madras Veterinary College, Chennai during June 13-14, 2015 organized by TANUVAS, Chennai and Agricultural Scientific Tamil Society, New Delhi for the research article entitled **"An economic assessment on adoption of hygienic practices in fish landing centres of Thoothukudi district"** (Oral Presentation) under Fisheries Session (II).

2. **Best paper award** in the Second National Conference held at Tamil Nadu Agricultural University, Coimbatore during August 5-6, 2016 organized by TNAU and Agricultural Scientific Tamil Society, New Delhi for the research article entitled **"Socio economic and constraint analysis of carp farmers in Krishnagiri district"** under Fisheries Session.

3. **Best paper award** in the Fourth National Conference held at IFPGS, Chennai during November 19-20, 2016 organized by TNJFU and Agricultural Scientific Tamil Society, New Delhi for the research article entitled **"Value chain analysis of farmed shrimp"** under Social Sciences division.

4. **Best Paper Award** for research paper titled **"Effect of climatic externalities on food security in coastal belt of Thoothukudi district, Tamil Nadu"** (Oral Presentation) in the National Conference on "Ascertaining food security through livelihood enriching interventions: Challenges and Opportunities" held at PAJANCOA & RI, Karaikal from 4th to 6th September, 2019.

Patents filled: Nil

Professional licensure and certification (If any) :

Annexure - II

6.5.4.5. Examination and Evaluation Process:

The evaluation of students' performance is a central task of College administration. A brief report on examination and evaluation process for UG, PG and PhD be given separately mentioning external/internal components. System of evaluation should clearly be mentioned for UG, PG and PhD.

System of evaluation for UG

Examination Rules

i. Internal theory Examination:

The internal theory examinations shall be conducted by the respective course teachers as per the time table given by the Dean of the college. The duration for the internal theory examination shall be 120 minutes and 20 marks. Examination shall be conducted for 80 marks and converted to 20 marks. There shall be no examination week for the internal theory examinations. The examinations may be conducted in the examination hall.

ii. Internal Practical Examination :-

Final practical examination shall be conducted by the respective course teacher. The internal practical examination will be conducted between the 95th and 105th working days of a semester. For courses with theory and practical credits, the duration of internal practical examinations shall be three hours. The practical examination shall be conducted for 50 marks with the following marks distribution:

a. Record - 10marks*
b. Practical - 35 marks
Viva
c. voce - 05 marks

*The evaluation of record may include the marks for regular submission / assignment / class room seminar / performance in the practical classes.

iii. Final External Theory Examination:

The final external theory examination shall be conducted after the completion of 105th working day of each semester. The final theory examination shall be for eighty marks (80). The question pattern shall have two types namely "Part A" and "Part B".

Part A i) shall have 15 multiple choice questions carrying 1.00 mark each. Each question shall have four choices with one right answer and ii) shall have 10 match the

following with 0.50 marks each. All the questions are compulsory. Questions shall be selected from all the five units of each course equally. Under Part B, there shall be five units and every unit shall have three questions out of which two questions (6 marks each) should be answered.

Question scheme:

Part A.

1. Multiple choice Questions. (15 x 1.00=15.00 marks)
2. Match the following (10 x 0.5 = 5 marks)

Part B.

Unit I. Answer any two of the following. (2/3 x 6 = 12.00 marks)
a.
b.
c.
Unit II. Answer any two of the following. (2/3 x 6 = 12.00 marks)
a.
b.
c.
Unit III. Answer any two of the following. (2/3 x 6 = 12.00 marks)
a.
b.
c.
Unit IV. Answer any two of the following. (2/3 x 6 = 12.00 marks)
a.
b.
c.
Unit V. Answer any two of the following (2/3 x 6 = 12.00 marks)
a.
b.
c.

Study holidays:

One day study holiday shall be given in between two examinations. Hence, there is no study holidays declared separately. If the next day happens to be Sunday, the successive working day shall be considered as examination day. However, this shall not be applicable for declared government holidays.

The examinations shall be conducted for two hours duration from 10.30 am to 12.30 p.m. Hall Superintendents, Invigilators and the students shall report at the examination hall

15 minutes prior to start of examinations. Grace period of any kind beyond the duration prescribed should not be given.

Absenting for final external theory examinations:

If any student absents for final external theory examinations**,** with minimum attendance of 80% in theory and practical separately, it shall be treated as failure (F) and the students shall be permitted for arrear examination.

Distribution of marks for calculation of grade point of a course:

The distribution of marks for calculation of grade point of a course is as follows:

a. Course with theory and practical credits alone

Examination	**Marks**
Internal Theory (I & II)	20
Final External theory examination	80
Practical	50
Total	**150**

The examinations for courses with theory and practical shall be conducted for 150 marks and converted to 100 marks in the marks statement.

b. Course with theory credits alone

Examination	**Marks**
Internal Theory	20
Final External theory examination	80
Total	**100**

c. Courses with practical credits alone

For courses with practical credits alone, the duration of internal examinations shall be three hours and conducted for 50 marks with following marks distribution.

Examination	**Marks**
Internal Practical	35
Record	10
Viva voce	05
Total	**50**

The examinations for course with practical only shall be conducted for 50 marks and converted to 100 marks in the marks statement.

Internal Examinations marks:

The Internal Examination marks should be made known to the students within seven days after the completion of Internal Examinations along with the corrected answer papers. The mark statement in the prescribed format should be sent to the Dean of the College through the Students' Coordinator after completion of all the internal examinations.

Minimum pass in a course:

A student shall obtain a minimum of 50% marks in theory and practical separately to pass in a course. Similarly for courses with either theory or practical credits alone, a minimum of 50% marks is required to pass in a course.

Supplementary examination:

There shall be supplementary examination for internal theory and internal practical examinations for students absenting themselves for a genuine reason with the recommendation of the students' coordinator. The students who absent themselves for internal theory examinations may be allowed to write supplementary examination before final practical examination on payment of a fine of Rs.500/- per examination. Supplementary practical examination shall be conducted before the completion of external theory examinations. The marks obtained in the first attempt for record shall be taken for supplementary practical examination.

Arrear Examinations:

There shall be arrear examination for students secured less than50% marks separately for theory and practical in a course. The arrear examination shall be conducted for the external theory or internal practical examination in which the student secured less than 50% marks. The marks obtained in the first attempt for record shall be taken for arrear practical examination. The fees shall be Rs.500/- per course. There shall be no arrear examination for internal theory examination.

Requirements for B.F.Sc degree:

A student undergoing course of study leading to award of B.F.Sc shall pass the course and complete the minimum number of credit hours prescribed there for, by the Academic Council from time to time by obtaining a minimum GPA of 5.00 for passing a course and OGPA of 5.50 on 10.00 point scale system for obtaining a degree.

To calculate the grade point of a course, the marks obtained for theory (100 marks) and practical (50 marks) will be converted to 100. The percentage of mark in a course is then divided by 10 and expressed in a 10 point scale up to one decimal place.

Credit point of a course is the product of credit hours and grade points obtained by the student in a course. Example, if in a course with 2+1 credit, if the grade point is 8.5, then the credit point of the course is 3 x 8.5 = 25.5.

Credit point average is the quotient of the total credit points obtained by the student in various courses at the end of each semester divided by the total credit hours taken by the student in that semester. The grading is done on a 10 point scale.

Overall grade point average (OGPA) is the quotient of cumulative credit points obtained by a student in all the courses from the beginning of the first semester of the degree divided by the total credit hours of all the courses completed up to the end of the 6th semester. The OGPA shall be rounded to two decimals taking the third decimal alone into consideration. Marks or grade obtained in ELP, All India Study Tour and IPT will not be taken into account for OGPA calculation. Total credit hours for B.F.Sc is 169

Index of grading:

OGPA of 5.50 to 7.49 – Second class
7.50 to 8.09 – First class
8.10 and above – First class with distinction

- For securing first class and distinction the student should have completed the degree programme without recording "F" in any course.
- Students recording "F" grade in one or more curses and who have secured an OGPA of 7.5 and above shall be awarded First class provided they complete the degree programme within the minimum prescribed period.
- Students shall be given any number of attempts to clear the arrear subject keeping the checks for movement from one year to another.

In addition to the provisions made in TNJFU Regulations 32.4.7, students shall not be permitted to register for VII semester (Student READY programme) of fourth B.F.Sc without passing all the courses in III and IV semesters of second year. Students shall not be permitted to register for VIII semester of fourth B.F.Sc without passing all the courses in I to VII semesters of the degree programme.

Students have a provision for applying for re-totalling after paying a fee of Rs.500 and revaluation after paying Rs.1000/.

Attendance

The attendance eligibility applies only for final external theory Examination and not for Internal Examinations. The attendance will however be reckoned from the day of the instruction (i.e. second day of registration week) as per the academic calendar. The attendance should be maintained by the course teacher and the certificate to this effect shall be sent to the University along with attendance in prescribed proforma well in advance, at least 5 days before the issue of hall ticket for semester external final theory examination. Hall Ticket will be issued by the Controller of Examination, based on the prescribed application from the candidate duly filled in. The shortage of attendance particulars should reach the "Controller of Examinations at least three days prior to issue of Hall Ticket. No student will be issued with a hall ticket unless they produce clearance certificate from the competent authority of accounts of Hostel administration.

Instructional Holidays

Instructional holidays shall be declared by the Dean of the College for the activities of students' association /academic events/ any in-house events if necessary and intimated to the University for the extension of the semester working days. These instructional holidays however should not exceed 10 days in an academic year.

Study Tour (0+2):

There shall be study tour (in and outside State) as part of Student READY programme to be performed during VII Semester of B.F.Sc degree programme as per the guidelines of Student READY Programme. This study tour shall be for 4 weeks' duration with 0+2 credit load. This four weeks' duration can be split into two spells of one week of state-wide tour and three weeks of outside the State tour with the same credit load. The number of accompanying teaching staff members shall be two, preferably the coordinator and one of the counsellors of concerned batch. The participation in the study tour is mandatory for all the students. On extraordinary circumstances, student shall be permitted to forfeit the tour on medical reasons or withdraw partially from performing the tour on health grounds. Such cases shall be reported and recommended by the accompanying staff to the Dean of the College for permission. For those who have not attended/partially attended/ shall be permitted to undergo lab work/farm work for the period of absence.

The minimum marks to pass in the Study Tour examinations shall be 50 and shall not be accounted for OGPA calculations. If any student fails in the Study Tour examination, shall appear for supplementary examination to be conducted between 3 and 5 working days after main Study Tour examination on payment of a fine of Rs,1000/-. Student shall be permitted to appear for only one supplementary examination. If any student fails in the supplementary examination should repeat the Study Tour along with ensuing batch of students and will not be permitted to register for VIII semester of fourth B.F.Sc degree programme.

Summer vacation:

Summer vacation shall be declared between 1st and 15th May every year for all B.F.Sc, students.

Semester holidays:

The semester holidays shall be declared for a period of 10 days oras decided by the University at the end of each semester.

System of evaluation for PG and PhD

Evaluation or Examination

The detailed guidelines for the conduct of examination (internal and final), Comprehensive Qualifying Examination, research credit evaluation, grading, recording, preparation of mark lists, transcripts etc. circulated from time to time by the University shall be followed. The schedule of examinations shall consist of internal and final examination in a semester for coursework and for research and seminar credits, the final evaluation will be done at the end of the semester concerned.

(1) Internal theory Examination

The internal theory examination would in variably be conducted on completion of 70th working day of these mester. The internal theory examinations shall be conducted by the respective course teachers as per the time table given by the Faculty Dean and guidelines issued by the University from time to time. It may be conducted only for theory for a duration of 45 minutes for a total mark of 20 consisting of questions of objective pattern for 10 marks and questions of subjective patternfor10marks.There shall not be any preparatory holiday for internal examination. The portions for the examination shall cover the topics completed from 1st working day to till the date of examination.

(2) Internal Practical Examination

The practical examination shall be conducted by the course teacher. For courses with theory and practical credits, the duration of internal practical examinations shall be three hours. The internal practical examination will be conducted before the start of final theory examination. The practical examination shall be conducted for 50marks.

(3) Final theory external Examination

It shall be a University examination comprising of theory conducted at the end of a semester. The theory examination shall be for 70 marks. The question paper for theory examination shall be set by the external examiners. However, the answer scripts of the courses shall be evaluated by the staff in the concerned department appointed by the Controller of Examinations internally.

The question type shall include A. Define (5outof6) for 10marks, B. Short notes (3 out of 4) for 15 marks C. Essay type (3 out of 4) for 45marks.The duration of the examination is two hours.

(4) Question scheme.-

I A. Define/ Explain the following (any FIVE only) (5x 2 = 10)

1.

2.

3.

4.

5.

6.

B.Write short notes (any THREE only) (3 x5 = 15)

1.

2.

3.

4.

C.Write essay (any THREE only) (3x15=45)

1.

2.

3.

4.

(5) Question paper setting.

The question paper shall be obtained from one external expert from the panellist of five experts given by the Head of the department. External expert shall provide two sets of question papers specifically mentioning the Unit number and the line from which the question was taken in the syllabus. Of the two sets of question papers, one question paper shall be finalized by the Controller of Examinations. Unit number and line in which the question is taken should be clearly stated by the question setter while preparing the question paper.

(a) Term paper-A term paper may be given for each course by the course teacher and it may be evaluated for a maximum of ten marks. (10)

(b) Distribution of marks for calculation of grade point of a course.-The distribution of marks for calculation of grade point of a course is as follows.-

Course with theory and practical

Examinations	Marks
Internal theory	20
Final external theory	70

Practical 1.Examination-30 2.Record -10 3.Vivavoce -10	50
Term paper	10
Total	**150**

Course with theory alone

Examinations	Marks
Internal theory	20
Final external theory	70
Term paper	10
Total	**100**

Courses with practical alone

Examinations	Marks
Internal Practical	30
Record	10
Viva-voce	10
Total	**50**

The examinations for courses with practical only shall be conducted for 50 marks and converted to 100 marks in the marks statement.

(6) Supplementary Examination

There shall be supplementary examination for internal theory examinations for students absenting themselves for a specified genuine reason with the recommendation of the students coordinator. However, the Faculty Dean has the discretionary power either to permit or reject the application after critically assessing the genuity of the reason(s) for absence. The students who absent themselves for internal theory examinations may be allowed to write supplementary examination before final practical examination on payment of a fine of Rs.200/-(Rupees two hundred only) per examination.

(7) Arrear Examination

There shall be arrear examination for students who secured less than 60% marks separately for theory and practical in a course. The arrear examination shall include external theory for 70 marks and internal practical for 50marks.The marks obtained in the first attempt for record shall be taken for arrear practical examination. The fees shall be Rs.200 (Rupees two hundred only) per course. There shall be no arrear examination for internal theory examination and internal practical examination.

(8) Comprehensive Qualifying Examination(CQE)

This is a mandatory examination to be taken up by all M.F.Sc., and Ph.D. students after completion of 90 working days of these second semester. The students should not be permitted to register for more than five research credits before successful completion of CQE. The details of conduct of CQE, evaluation details and method of conduct of viva-voce

shall be as per the guidelines issued by the University from time to time. The question paper for CQE for M.F.Sc., and Ph.D. programmes shall be set by the external examiner. The evaluation of answer books and conduct of viva-voce shall be done by the Advisory Committee. The results for CQE shall be graded as satisfactory/unsatisfactory. The qualifying mark for "satisfactory" shall be 60%. In case of unsatisfactory performance, the student has to reappear for the CQE after three months and such re-appearances are restricted to two. In total, the appearances are restricted to three. In such case, the student has to re-appear for the qualifying examination on payment of Rs.500/- (Rupees five hundred only) per appearance.

(9) Evaluation of M.F.Sc., / Ph.D. seminars.-

The M.F.Sc.,/Ph.D. seminar (s) is / are mandatory for all PG students with a credit load of 1+0 and 2+0 for M.F.Sc., and Ph.D. students, respectively. The Advisory Committee should assign the seminar topics during the beginning of a semester. The students are expected to prepare a seminar paper after carefully reviewing the literatures and such other materials. The advisory committee shall evaluate the performance of the seminar credits registered by the students at the end of semester. The evaluation should be conducted during the last fortnight of the semester when all the members of the Advisory Committee are available. Normally the students are not expected to absent themselves for seminar credit evaluation. Under extraordinary circumstances a late evaluation within ten working days from the last working day of the semester may be permitted by the Faculty Dean of the college concerned on payment of a fine of Rs 200/- (Rupees two hundred only). In circumstances, where a member of the Advisory Committee may not be available necessary permission has to be obtained for conduct of evaluation in the absence of one member from the Faculty Dean of the College concerned. If more than one member may not be available, permission has to be obtained from the University. In circumstances where the Chairman is not available for evaluation, late evaluation may be permitted by the faculty Dean within ten working days from the last working day. In extraordinary circumstances where the chairman may not be available even within this period, the head of department can act as Chairman after obtaining permission from the Faculty Dean of the College concerned. In the event of HOD acting as Chairman and not available within this period, the Faculty Dean / nominee of the Faculty Dean can act as Chairman and conduct evaluation. The performance of the student should be evaluated by the Advisory Committee as per the following norms.-

Particular	Marks
Coverage of literature	40
Presentation	30
Use of AV aids	10
Capacity to participate in the discussion	20
Total	**100**

A time schedule regarding the conduct of seminar has to be prepared by the Chairman and the same has to be communicated to the respective individuals and Advisory Committee well in advance. In case of failure, the student has to re-register the credit in the subsequent semester.

(10) Evaluation of research credit.-

The performance of the research credit registered by the students during the semester shall be evaluated by the Advisory Committee at the end of each semester preferably during the last week of semester. The evaluation should be conducted by all members of the Advisory Committee. For research credits, Grades will not be awarded. Advisory Committee can give an evaluation statement "Satisfactory / Not Satisfactory" mentioning lack of requirements like attendance/ adherence to the programme / satisfactory progress, etc., to proceed to next semester. Research credits will not be included for OGPA calculation.

In the final semester in which the student is submitting the thesis, evaluation of the research credits by the Advisory Committee and submission of thesis by the student may be done on a convenient day during last week of semester in which all members are present on completion of mandatory attendance limit of 80 % and 100 % completion of work committed to do at the beginning of the semester by the student. Final research semester will be evaluated as "Satisfactory / Not Satisfactory". In case of "Not Satisfactory", a grade of "Incomplete" shall be awarded and the student has to re-register for the same credit load of research again in the subsequent semester. The student has to get the permission of Faculty Dean of the College concerned for re-registration of incomplete research credits. In case of re-registration of same credit load of research after second time, the matter may be referred to the Deans' committee and the University. Normally the students are not expected to absent themselves for research credit evaluation. Under extraordinary circumstances a late evaluation within ten working days from the last working day of the semester including final semester in which student is submitting thesis may be permitted by the Faculty Dean of the College concerned on payment of a fine of Rs.200/ (Rupees two hundred only)**.** However, it is the prerogative of the Faculty Dean to decide whether, the circumstances for late evaluation stated by the student really warrants it. In case of wilful absence, the Advisory Committee, in consultation with Faculty Dean of the College concerned, may award incomplete grade. Normally all members of the Advisory Committee should present themselves for evaluation of research credit. Under extraordinary circumstances in which a member of the Advisory Committee may not be available, necessary permission has to be obtained for conduct of evaluation in the absence of one member from the faculty Dean of the College concerned. If more than one member may not be available, permission has to be obtained from the University. In circumstances where the chairman is not available for evaluation, a late evaluation may be permitted by the Faculty Dean within ten working days from the last working day. In extraordinary circumstances where the Chairman may not be available even within this period, the head of department can act as chairman after obtaining permission from the Faculty Dean of the College concerned. In the event of HOD acting as Chairman and not available within this period, the faculty Dean/ nominee of the Faculty Dean can act as Chairman and conduct evaluation. If a student has not got mandatory attendance limit of 80%, a grade of incomplete may be awarded and the student has to re-register for the same credit load of research again in the subsequent semester. The student has to get the permission of Faculty Dean of the College concerned for re-registration of incomplete research credits. In case of re-registration of same credit load of research after second time, the matter may be referred to the Dean's committee and University.

(11) Final viva-voce examination.-

On the basis of recommendation for acceptance of thesis, the University shall forward the reports of the external examiner to the Chairman of the Advisory Committee for conducting final viva-voce examination for the postgraduate students. The thesis shall be sent to one external examiner for M.F.Sc., degree and two external examiners for Ph.D. programmes. The final viva-voce shall be conducted by the External Examiner along with the Advisory Committee for M.F.Sc., programmes, whereas for Ph.D. programmes, the final viva-voce shall be conducted by one of the External Examiners decided by the University along with the Advisory Committee. The details and method of conduct of final viva-voce shall be as per the guidelines issued by the Faculty Dean and University from time to time. The date for final viva-voce should be fixed by the Chairman taking into account the availability of all members of the Advisory Committee after verifying the fact regarding carrying out corrections and suggestions specified by the external examiners. Normally all the members of the Advisory Committee should be present for final viva-voce. In case of extraordinary circumstances where a single member may not be available, necessary permission has to be obtained from the Faculty Dean of the College concerned. If more than one member may not be available the final viva-voce examination has to be postponed.

In circumstances, where the Chairman of the Advisory Committee may not be available for a sufficiently longer duration for the conduct of final viva-voce, the Faculty Dean of the College concerned may nominate from a panel of three suitable persons from the discipline in which the student is majoring to the University and the person selected by the University may act as Chairman for the conduct of final viva-voce examination. During the final viva-voce, the student shall defend the thesis in front of Advisory Committee, Head of the department, invited staff, students and external expert. The degree shall be awarded on the unanimous recommendation of the examining committee with regard to the thesis itself and the performance of the student in the final viva-voce examination. The performance shall be evaluated as Satisfactory / Unsatisfactory. The opinion of the majority members of the Advisory Committee shall be taken into account. If difference of opinion arises among the members, Chairman of the Advisory Committee's decision shall be the final. In case of failure, the student has to reappear for viva-voce examination after three months on payment of a fine of Rs.500/- (Rupees five hundred only).

(12) Unfair means during examinations.-

The Faculty Dean of the College shall be responsible for dealing with all cases of “use of unfair means" in the various examinations. The phrase, “use of unfair” means includes possession of any information or material by the student, talking to other students, copying from other students or from printed or written material etc. The Invigilator concerned, on finding the use of unfair means by any student, may take the answer scripts of the student and the material evidences, if any. The student shall be sent out of the examination hall immediately. The Invigilator concerned shall report each case of unfair means direct to the Faculty Dean immediately with full details of the incident, answer scripts and the available evidences. The Faculty Dean, on receipt of the report, may give an opportunity to the concerned student to explain the case. Considering all the available evidences provided by the invigilator and the explanations given by the student, the Faculty Dean shall take appropriate action immediately. The penalty shall be as indicated below.-

(a) A student found using unfair means during internal examinations should be deemed to have failed in that course;

(b) A student found using unfair means during the semester final external examinations should be deemed to have failed in that course. In such case, the student shall not be permitted to take the remaining examinations, if any, in that semester and shall also be deemed to have attempted and failed in the remaining examinations;

(c) The Faculty Dean shall report each case falling under clauses (a) and (b) above immediately, after passing orders to the University;

(d) For using unfair means of a serious nature such as ignoring the repeated instructions of Invigilator or abusing or threatening or assaulting the Invigilator, warranting higher penalties that those indicated in clauses (a) and (b) above, the Faculty Dean, besides treating the students as failed in all the courses the student registered in that semester, may further debar the student for the next semester and succeeding year and the fact informed to the University based on the recommendations of the enquiry committee constituted by the Faculty Dean. If further or more severe punishment is felt necessary, the Faculty Dean shall immediately inform the University about the full details of each together with all the material evidence, if any, and his recommendation. The explanation or representation of the student, if any, may also be sent. The Vice-Chancellor after examining the case, may debar the student for further period or permanently. The decision of the Vice-Chancellor is final;

(e) The parent or the guardian of the concerned student shall be informed of any punishments awarded to the student and the reason therefor.

(13) Scrutiny of marks.-

The student may apply to the Registrar through the Faculty Dean of the College concerned for re-totalling / revaluation of answer papers in the prescribed format not later than ten working days after declaration of the results. The fee for the same shall be Rs. 100/- (Rupees one hundred only) for re-totalling and Rs.200/- (Rupees two hundred only) for revaluation for each course.

Thesis.-

(1) **Thesis.-** The thesis should consist of major sections namely introduction, review of literature, materials and methods, results and discussion, summary and conclusions and bibliography. The thesis for the M.F.Sc., degree should be of such a nature as to indicate the student's potentialities for conducting research. The thesis for the Ph.D. degree should be of the nature of definite contribution to the subject.

(2) **Topic.-** The thesis shall be on a topic falling within the field of the major subjects and shall be the result of the independent work of the students.

(3) **Change of topic.-** The topic once chosen and approved for research credit evaluation should not be normally changed. However, on extraordinary circumstances where such a change is warranted it should be done before completion of 30 working days in the third semester. On the recommendation of the Advisory Committee, such changes can be approved by the Faculty Dean.

(4) **Change of title.-** The title given in the synopsis shall be taken as final title and title given at the time of approval of the programme of research shall be taken as tentative. However, change in the area of research and objectives are subject to modifications as specified in clause 10(3).

(5) **Synopsis.-** Submission of thesis should be preceded by submission of synopsis to the University between 55th and 60th day of the third semester. The synopsis should not exceed five pages and should consist of brief report of the work done. The synopsis should be accompanied by a sealed cover consisting of a panel of five experts for the University to select external expert(s) for evaluation. The approved programme of research work should also be furnished along with the synopsis.

(6) **Guidelines.-** The detailed guidelines issued by the University in the preparation of the thesis shall be followed for M.F.Sc., and Ph.D. thesis.

(7) **Submission.-** The thesis shall be submitted on any day among the last five working days of the semester. Two copies of thesis for M.F.Sc., and three copies of thesis for Ph.D. should be submitted in paperback. After its final approval and after incorporating the suggestions of examiners if any, five copies (Six copies for ICAR fellowship holders) of thesis should be bound and be submitted to the University. It should be hard bound only after completion of final viva- voce and carrying out the corrections suggested by the external experts.

(8) **Late submission.-** The students shall submit the M.F.Sc.,/ Ph.D. thesis on any day among the last five working days of the final semester. The students who could not submit their theses on the last five working days should not be evaluated for the research credits. However, students failing to submit the theses on the last five working days shall submit the theses during any time in the extended semester after paying a fee of Rs.500/- (Rupees five hundred only) as late fee for thesis submission. In this case, a proposal should be sent by the Advisory Committee to University through Dean of the College concerned for permission for submission of thesis at any time during the extended semester. In circumstances where a student is not able to submit even after the extended period, the grade "incomplete" may be given and the research credits already registered in the last semester has to be re-registered. However, in circumstances where the student is ready with the thesis but the Chairman or more than one Advisory Committee members are not available on last five working days of the semester, the faculty Dean of the college concerned may decide the date of submission and evaluation under intimation to the University.

(9) **Publications.-** The students are allowed to publish their work even before submitting the thesis. The copies of such publication should be enclosed with thesis while submission. Manuscripts of at least one research paper should be submitted along with the thesis during final submission of M.F.Sc., thesis, and for Ph.D., students one research paper should have been accepted in peer reviewed / NAAS rating journal and another one submitted in peer reviewed journal or one patent filed.

(10) **Rejection of M.F.Sc., thesis.-** The M.F.Sc., thesis rejected by one external expert may be sent to second external expert in the panel on the request of the Advisory

Committee. If the second external expert accepts the thesis for award of the degree, then the final viva- voce may be conducted for award of degree. If the second expert also rejects the thesis, the thesis is considered as rejected and the student has to re-register the research credits and carry out necessary works and corrections after a gap of one semester and re submit the thesis.

(11) **Rejection of Ph.D. thesis.-** In case of single dissenting note received from one of the two external experts to whom the thesis was sent, the University on recommendation of the Advisory Committee may send the thesis to third external expert in the panel. If the third member recommends the thesis for acceptance, then the final viva-voce may be conducted for award of degree. If the third expert also rejects the thesis, the thesis is considered as rejected and the student has to re-register the research credits and carry out necessary work and corrections after a gap of one semester and re submit the thesis.

(12) **Final submission.-** After the conduct of the final viva-voce, the Chairman of the Advisory Committee should forward the hardbound thesis along with a certificate for carrying out corrections suggested by the external experts for award of the degree.

TAMIL NADU Dr. J JAYALALITHAA FISHERIES UNIVERSITY

Self Study Report for Under Graduate Degree (B.F.Sc.) Programme

Submitted by

Fisheries College and Research Institute,
Thoothukudi – 628 008
Tamil Nadu

6.4. SELF STUDY REPORT FOR THE B.F.SC. PROGRAMME

6.4.1. Brief History of the Undergraduate Degree Programme (B.F.Sc.) :

The Fisheries College was started at Thoothukudi by the Tamil Nadu Agricultural University (TNAU) in October, 1977 as the second fisheries college in India to offer B.F.Sc., degree programme. It was brought under the Tamil Nadu Veterinary and Animal Sciences University (TANUVAS) on 19th September, 1989. The college was renamed as Fisheries College and Research Institute (FC&RI) in 1990 to focus more on teaching, research and extension activities. Theyearly intake capacity of B.F.Sc students between 1977 and 2005 it was gradually increased to 30, 35, 40, 50 since 2006 with a present intake capacity of 60 students per. In total, there are eight departments functioning in the college, the B.F.Sc Degree Programme supported by all of these departments.



Academic cum Administrative Block

UG DEGREE COURSES OFFERED AT FC & RI, THOOTHUKUDI

1. DEPARTMENT OF AQUACULTURE

Sl. No.	Course No.	Course title	Credit Hours
1.	FS 101	Principles of Aquaculture	2 (1+1)
2.	FS 110	Freshwater Aquaculture	3 (2+1)
3.	FS 111	Aquaculture in Reservoirs	2(1+1)
4.	FS 201	Ornamental Fish Production and Management	2(1+1)
5.	FS 202	Fish Food Organism	2 (1+1)
6.	FS 210	Coastal Aquaculture and Mariculture	3 (2+1)
7.	FS 211	Genetics and Breeding	2 (1+1)
8.	FS 212	Fish Nutrition and Feed Technology	3 (2+1)

9.	FS 301	Finfish Hatchery Management	3 (2+1)
10.	FS 302	Introduction to Biotechnology and Bioinformatics	3 (2+1)
11.	FS 308	Aquaculture Engineering	3 (2+1)
12.	FS-310	Shellfish Hatchery Management	2 (1+1)
13.	FS-402	ELP - RAW	10 (0+10)

2. DEPARTMENT OF FISHERIES BIOLOGY AND RESOURCE MANAGEMENT

Sl. No.	Course No.	Course Title	Credit Hours
1.	FS-102	Taxonomy of Finfish	3 (1+2)
2.	FS-103	Anatomy and Biology of Finfish	3 (2+1)
3.	FS-112	Taxonomy of Shellfish	2 (1+1)
4.	FS-115	Inland Fisheries	3 (2+1)
5.	FS-201	Physiology of Finfish and Shellfish	3 (2+1)
6.	FS-302	Anatomy and Biology of Shellfish	2 (1+1)
7.	FS-305	Marine Fisheries	3 (2+1)
8.	FS-308	Population Dynamics and Stock Assessment	3 (2+1)

3. DEPARTMENT OF FISH PATHOLOGY AND HEALTH MANAGEMENT

Sl.No.	Course No.	Course title	Credit Hours
1.	FS 203	Fish Immunology	2 (1+1)
2.	FS 216	Fish and Shellfish Pathology	3 (2+1)
3.	FS 221	Pharmacology	3 (2+1)
4.	FS 304	Fish Toxicology	2 (1+1)
5.	FS 311	Microbial and Parasitic Diseases of Fish and Shellfish	3 (2+1)
6.	FS 312	Therapeutics in Aquaculture	2 (1+1)

4. DEPARTMENT OF AQUATIC ENVIRONMENT MANAGEMENT

Sl.No.	Course No.	Course Title	Credit hours
1.	FS 104	Meteorology, Climatology and Disaster Management	3 (2 +1)
2.	FS 105	Soil and Water Chemistry	3 (2+1)
3.	FS 115	Limnology	3 (2+1)
4.	FS 116	Marine Biology	3 (2+1)
5.	FS 205	Aquatic Ecology and Biodiversity	3 (2+1)
6.	FS 215	Fishery Oceanography	2 (1+1)

7.	FS 216	Aquatic Pollution and Coastal Zone Management	3 (2+1)

5. DEPARTMENT OF FISH PROCESSING TECHNOLOGY

Sl. No.	Course No.	Course Title	Credit Hours
1.	FS-106	Fundamentals of Biochemistry	3 (2+1)
2.	FS-107	Fundamentals of Microbiology	3 (2+1)
3.	FS- 206	Freezing Technology	2 (1+1)
4.	FS-217	Fish Canning Technology	2 (1+1)
5.	FS-306	Fish By-Products and Waste Utilization	2 (1+1)
6.	FS-313	Fish Products and Value Addition	3 (2+1)
7.	FS-314	Fish Packaging Technology	2 (1+1)
8.	FS 401	Students Ready programme – In-Plant and ELP	0+22

6. DEPARTMENT OF FISHING TECHNOLOGY AND FISHERIES ENGINEERING

Sl.No.	Course No.	Course title	Credit Hours
1.	FS 207	Refrigeration and Equipment Engineering	3 (2+1)
2.	FS 218	Fishing Gear Technology	2 (1+1)
3.	FS 309	Fishing Craft Technology	2 (1+1)
4.	FS 316	Fishing Technology	2 (1+1)
5.	FS 317	Navigation and Seamanship	2(1+1)

7. DEPARTMENT OF FISH QUALITY ASSURANCE AND MANAGEMENT

Sl. No.	Course No.	Course Title	Credit Hours
1.	FS 117	Food Chemistry and Fish in Nutrition	3 (2+1)
2.	FS 307	Microbiology of Fish and Fishery Products	3 (2+1)
3.	FS 315	Quality Assurance of Fish and Fishery Products	3 (2+1)

8. DEPARTMENT OF FISHERIES EXTENSION, ECONOMICS AND STATISTICS

Sl. No.	Course No	Course Title	Credit Hours
1	FS 108	Statistical Methods	3 (2 + 1)
2	FS 118	Information and Communication Technology	2 (1 + 1)

3	FS 208	Fisheries Extension Education and Personality Development	3 (2 + 1)
4	FS 209	Fisheries Economics	3 (2 + 1)
5	FS 318	Fisheries Administration and Entrepreneurship Development	2 (2 + 0)
6	FS 319	Fisheries Co-operatives, Marketing and Business Management	3 (2 + 1)
7	FS 401	Student READY Programme	
		a) In-plant attachment (for 8 weeks)	10 (0 + 10)
		b) Rural Fisheries Work Experience Prog. (for 8 weeks)	8 (0 + 8)
		c) Study Tour (in and outside State) (for 4 weeks)	2 (0 + 2)
8.	FS 402	Student READY Programme	
		a) Skill Development Programme	5 (0 + 5)
		b) Experiential Learning Programme	15 (0+15)
		c) Project Work	2 (0+2)
		d) Seminar	1 (0+1)

6.4.2. Faculty Strength:

The both sanctioned and in-place cadre wise faculty strength for offering various degree programmes is provided in the table below. The number of permanent faculty appointed for offering the degree programmes is also clearly mentuioned.

List of Teaching Staff Sanctioned Strength, Position and vacancy in FC & RI, Thoothukudi (as on 31.10.2020)

Sl. No	Name of the Sanctioned Post	Sanctioned Strength	Position	Vacant
I	**Dean's Office (14- 101)**			
4.	Dean	1	1	0
5.	Asst. Librarian	1	1	0
6.	Asst. Director of Physical Education	1	1	0
	Total	**3**	**3**	**0**
II.	**Dept. of Fisheries Biology and Resource Management (14-102)**			
3.	Assoc. Prof.	1	0	1
4.	Asst. Prof.	3	2	1
	Total	**4**	**2**	**2**
III.	**Dept. of Aquatic Environment Management (14-103)**			
3.	Assoc. Prof.	1	1	0
4.	Asst. Prof.	3	3	0
	Total	**4**	**4**	**0**

IV.	**Dept. of Aquaculture (14-104)**			
2.	Asst. Prof	4	4	0
	Total	**4**	**4**	**0**
V.	**Department of Fish Pathology and Health Management (14-106)**			
7.	Professor	1	1	0
8.	Assoc. Prof.	1	0	1
9.	Asst. Prof.	2	2	0
	Total	**4**	**3**	**1**
VI	**Dept. of Fishing Technology and Fisheries Engineering (14 -108)**			
3.	Assoc. Prof.	1	0	1
4.	Asst. Prof.	2	2	0
	Total	**3**	**2**	**1**
VII	**Dept. of Fish Processing Technology (14-109)**			
4.	Professor	1	0	1
5.	Assoc. Prof.	1	0	1
6.	Asst. Prof.	3	3	0
	Total	**5**	**3**	**2**
VIII	**Dept. of Fish Quality Assurance and Management (14-110)**			
4.	Professor	1	1	0
5.	Assoc. Prof.	2	0	2
6.	Asst. Prof.	3	3	0
	Total	**6**	**4**	**2**
IX	**Dept. of Fisheries Extension, Economics and Statistics (14-125)**			
10.	Professor	1	1	0
11.	Associate Prof.	1	0	1
12.	Asst. Prof.	7	2	5
	Total	**9**	**3**	**6**
	Grand Total	**42**	**28**	**14**

S. No.	Designation	Sanctioned Faculty	Faculty in place	Vacant position	Faculty recommended by the ICAR/UGC/VCI/ other regulatory bodies
1.	Professor*	5	7	1	7
2.	Associate Professor*	8	2	7	11
3.	Assistant Professor*	29	21	6	20

*offering courses for UG and PG degree programmes, besides research and extension activities

6.4.3. Technical and Supporting staff:

The position of technical and supporting staff (both sanctioned and in-place) of the degree programmes including the farm and field workers are mentioned in the Table below.

List of Non -Teaching Staff Sanctioned Strength, Position and Vacancy in FC &RI, Thoothukudi (as on 31.08.2021)

Sl. No.	Name of the post	Sanctioned strength	In Position	Vacant
I.	**Dean's Office (14-101)**			
1.	Administrative Officer	1	1	-
2.	Asst. Accounts Officer	1	1	-
3.	Superintendent	2	2	-
4.	Asst. Public Relation Officer	1	1	-
5.	Assistant (Non-Sec.)	6	5	1
6.	Assistant (Sec.)	1	1	-
7.	Jr. Assistant (Sec.)	1	1	-
8.	Jr. Assistant (Non-Sec.)	3	1	2
9.	Steno- Typist Gr. II	1	1	-
10.	Typist	1	1	-
11.	Attender	1	1	-
12.	Office Assistant	1	1	-
13.	Marker	1	1	-
14.	Sweeper	2	2	-
15.	Gardener	1	1	-
	Total	**24**	**21**	**3**

Sl. No.	Hostel	Sanctioned strength	In Position	Vacant
1.	Assistant (Sec.)	1	1	0
2.	Attender	1	1	0
3.	Motor Pump Attendant	1	1	0
4.	Cleaner	1	1	0
5.	Time Scale Mazdoor	1	1	0
6.	Provincialized Mazdoor	1	1	0
	Total	**6**	**6**	**0**

Sl. No.	Education Cell	Sanctioned strength	In Position	Vacant
1	Superintendent	1	1	-
2	Typist	1	-	1
	Total	**2**	**1**	**1**

Sl. No.	Engineering Unit	Sanctioned strength	In Position	Vacant
1.	Typist	1	1	-
2.	Plumber	1	1	-
3.	Time Scale Mazdoor	1	1	-
4.	Asst. Engineer (Elec.)	1	1	-
5.	Junior Engineer upgraded as Asst. Engineer (Civil)	1	1	-

6.	Driver	6	6	-
7.	Sweeper cum scavenger	2	2	-
	Total	**13**	**13**	**0**
	Grant total	**45**	**41**	**4**

Department of Fisheries Biology and Resource Management (14-102)

Sl. No.	Name of the post	Sanctioned strength	In position	Vacant
1.	Typist	1	1	0
2.	Attendant	1	1	0
3.	Sub-Inspector of Fisheries	1	1	0
4.	Museum Curator	1	1	-
	Total	**4**	**4**	**0**

Department of Aquatic Environment Management (14-103)

Sl. No.	Name of the post	Sanctioned strength	In position	Vacant
1.	Junior Asst.(Non-Sec)	1	0	1
2.	Attender	2	2	0
	Total	**3**	**2**	**1**

Department of Aquaculture (14 -104)

Sl. No.	Name of the post	Sanctioned strength	In Position	Vacant
1.	Computer Operator	1	1	0
2.	Typist	1	1	0
3.	Attender	3	3	0
4.	Office Assistant	1	1	0
5.	Time Scale Mazdoor	4	4	0
6.	Sub-Inspector of Fisheries	1	1	0
7.	Fishery Assistant	2	2	0
8.	Agrl. Supervisor (Re-designated as Farm Manager)	1	1	0
9.	Fisherman	2	2	0
	Total	**16**	**16**	**0**
Th.K.Murugan, Attender, IPGS, Vaniyanchavadi (working arrangement in the Dept. of Aquaculture)				

Department of Fish Pathology and Health Management (14-106)

Sl. No.	Name of the post	Sanctioned strength	In Position	Vacant
1.	Assistant (Non-Sec.)	1	1	0
2.	Jr. Assistant (Non-Sec.)	1	1	0
3.	Office Assistant	1	1	0
4.	Watchman	1	1	0
5.	Lab. Technician (Re-designated as Technician)	1	1	0
6.	Lab. Attendant	1	1	0
	Total	**6**	**6**	**0**

Department of Fishing Technology and Fisheries Engineering (14-108)

Sl. No.	Name of the post	Sanctioned strength	In Position	Vacant
1.	Typist	1	1	0
2.	Asst. Engineer (Mech.)	1	0	1
3.	Skipper	1	0	1
4.	Bosun	1	1	0
5.	Mechanical Gr. II	1	1	0
6.	Deck Hand	2	2	0
7.	Seaman	1	1	0
8.	Electrical Foreman (Engine Driver converted as Electrical Foreman)	1	1	0
9.	Attender	1	1	0
	Total	**10**	**8**	**2**

Department of Fish Processing Technology (14-109)

Sl. No.	Name of the post	Sanctioned strength	In Position	Vacant
1.	Sub-Inspector of Fisheries	1	1	-
2.	Lab. Assistant	2	2	0
3.	Iceman	1	1	0
4.	Refrigeration Operator	1	1	0
	Total	**5**	**5**	**0**

Department of Fish Quality Assurance and Management (14 -110)

Sl. No.	Name of the post	Sanctioned strength	In Position	Vacant
1.	Jr. Assistant(Non-Sec.)	1	1	0
2	Lab. Assistant	2	2	0
3.	Sweeper cum Scavenger	1	1	0
4.	Time Scale Mazdoor	1	1	0
5.	Lab. Attendant	1	1	0
	Total	**6**	**6**	**0**

Department of Library (14-117)

Sl. No.	Name of the post	Sanctioned strength	Position	Vacant
1.	Library Assistant	1	1	0
2.	Office Assistant	1	1	0
3.	Library Attendant	1	1	0
	Total	**3**	**3**	**0**

Department of Fisheries Extension, Economics and Statistics (14-125)

Sl. No.	Name of the post	Sanctioned strength	In Position	Vacant
1.	Data Entry Operator	1	1	0
2.	Time Scale Mazdoor	1	1	0
3.	Electrician Gr. II	1	1	0
	Total	**3**	**3**	**0**
	Grand Total	**101**	**94**	**7**

6.4.4. Classrooms and Laboratories:

No. of UG Classrooms – 3
No. of Laboratories – 20

Batch	Area	Seating Capacity	Facilities
I B.F.Sc	910 Sq. Feet	70	LCD projector CCTV surveillance Green board Podium Window screen Wi-fi
II B.F.Sc	910 Sq. Feet	70	
III B.F.Sc	910 Sq. Feet	70	



Facilities available in Departments for offering degree programmes

Sl. No.	Name of the unit	Address of the unit	Year of establishment
1.	Soil and Water Chemistry Laboratory	Department of Aquatic Environment and Management	1977
2.	Reservoir and Farm ponds	Fisheries College and Research Institute, Thoothukudi	1980
3.	Aquatic Microbiology laboratory	Department of Aquatic Environment Management	1983
4.	Fisheries Museum	Department of Fisheries Biology and Resource Management	1985
5.	Mother Aquarium	Fisheries College and Research Institute, Thoothukudi	1991
6.	Bacteriology unit	Department of Fish pathology and Health Management	1991-94
7.	Glass house Aquarium	Fisheries College and Research Institute, Thoothukudi	1995
8.	Fish virology and cell culture unit	Department of Fish Pathology and Health Management,	2001
9.	Fishing vessels of FRP boat	Fishing Harbour, Thoothukudi	2003
10.	Mariculture Research Farm Facility	Tharuvaikulam, Thoothukudi	2004

11.	Cryopreservation laboratory	Fisheries College and Research Institute, Thoothukudi	2005
12.	Field lab	Fisheries College and Research Institute, Thoothukudi	2005
13.	ICAR- ELP unit	Fisheries College and Research Institute, Thoothukudi	2007
14.	Tilapia Hatchery	Fisheries College and Research Institute, Thoothukudi	2009
15.	Biofloc Unit	Fisheries College and Research Institute, Thoothukudi	2011
16.	Ornamental fish rearing unit I & II	Fisheries College and Research Institute, Thoothukudi	2012
17.	Instrumentation lab I & II	Department of Fish Quality Assurance and Management	2012
18.	Biochemistry Unit for Quality Assurance	Department of Fish Quality Assurance and Management	2012
19.	Microbiology Unit for Quality Assurance	Department of Fish Quality Assurance and Management	2012
20.	Molecular Biology Unit	Department of Fish Quality Assurance and Management	2012
21.	Central Instrumentation Lab **Equipment available** • Fermenter • Spectrophotometer • Thermal cycler • Nitrogen Analyser • Microscope • Gel Electrophoresis unit • Gel Documentation System • PCR • Gas Chromatography • HPLC • Inverted microscope	Department of Aquatic Environment Management	2014

	• Cooling Centrifuge		
22.	Gear Technology	Shore campus, Fishing Harbour, Thoothukudi	2014
23.	Marine Engineering workshop	Department of Fishing Technology and Fisheries Engineering	2014
24.	Electronics lab	Department of Fishing Technology and Fisheries Engineering	2014
25.	Navigation Lab	Department of Fishing Technology and Fisheries Engineering	2014
26.	FRP Vallam	Fishing Harbour, Thoothukudi	2014
27.	NADP- Fish Processing Vocational Training Centre	Department of Fish Processing Technology	2015
28.	NADP- Seafood Knowledge High Way Centre	Teachers Colony, Thoothukudi	2015
29.	Microbiology Unit for Fish Processing Technology	Department of Basic Science, Fisheries College and Research Institute, Thoothukudi	2015
30.	Aquatic Animal health and Environment Management Laboratory renamed as TNJFU referral laboratory for Aquatic Animal Health	Department of Fish Pathology and Health Management,	2016-17
31.	Biochemistry Unit for Fish Processing Technology	Department of Fish Processing Technology	2017
32.	Fish and Shellfish Health Certification and Disease Surveillance Laboratory established under NADP under TNJFU	Department of Fish Pathology and Health Management	2018
33.	NADP- Kayalagam Incubation Centre	Department of Fish Processing Technology	2019
34.	EDII- Marine Products Business Incubation Forum	Department of Fish Processing Technology	2019
35.	Renovated Shore Lab Field Research Facility (SRFF)	Department of Fisheries Biology and Resource Management	2019

6.4.5 Conduct of Practical and Hands-on-Training:

It is important to have a sound grasp of the theory that underlies any professional degree. But there are some skills that can only be learned through hands-on-practice. It is important that much of the learning material in any given course should be provided in a way that allows students to get as involved as possible to increase their knowledge and abilities. Mentioned below how far students are getting desired practical and hands-on-training as per the curriculum and meeting the above mentioned requirements. The following programmes are offered as part of the curriculum to impart hands on training and equip the students as competent professionals.

Details of IPT, RAWE and SRP (FS 401 & 402):

I. Details of the work implement for IPT 421

The IPT 421 In-Plant Training (0+20) programme for IV B.F.Sc. students is offered at the VIII semester with total credit hours of 20. The following programmes were conducted for 105 days.

1. Attachment with fish processing plants (42 days – 8 credits).
2. Attachment with aquaculture farms (63 days – 12 credits).

Details of FS 401 SRP (0+20) conducted:

- In-Plant attachment for 14 credits (70 days, 65 marks).
- Rural Fisheries Work Experience for 4 credits (10 days, 20 marks).
- All India Study tour for 2 credits (25 days, 15 marks).

In-Plant attachment for 14 credits (70 days, 65 marks)

The students were attached with fish processing plants in and around Thoothukudi district. The following plants were identified and the students were sent to these plants gain experience in fish processing activities.

- Deva & Co Seafoods (5 students)
- Idhayam & Co Seafoods (5 students)
- Ninan Pvt. Ltd. Seafoods (5 students)
- Kadhar Investments and Trading Company (4 students)
- V.V. Marine Products (6 students)
- Kings Seafoods (5 students)

- Diamond Seafoods (4 students)

The following fish / shrimp farms were identified and the students were to these farms gain to get experience in fish / shrimp farming activities.

- Himalayan Fish Farm, Thittai, Thajavur (5 students)
- Chola Fish Farm, Vaduvoor, Thanjavur (4 students)
- Amman Shrimp Farm, Mimisal, Pudukkottai District (3 students)
- Mariculture Research Farm Facility, Tharuvaikulam, Thoothukudi (6 students)
- Ornamental Fish Farm, Keeranoor, Thoothukudi (3 students)
- Ornamental Fish Farm, Edaiyarkadu, Thoothukudi (3 students)

II. Rural Fisheries Work Experience for 4 credits (10 days, 20 marks):

The following fishing villages in and around Thoothukudi District were identified for Rural Fisheries Work Experience by the students.

1. Tharuvaikulam
2. Therespuram
3. Punnakayal
4. Kombuthurai
5. Amalinagar

III. All India Tour (Study tour):

The Students had undergone AIT for 25 days under the leadership of a faculty of College.

Details of FS 402 Conducted:

- **Skill development in the following aspects:** (with a total of 5 credits for 25 days, 25 marks).
  1. Formulation and preparation of aqua feeds (For 1 credit, 5 days and 5 marks).
  2. Analysis of soil and water quality parameters (For 2 credits, 10 days and 10 marks) and
  3. Preparation of fishery products (2 credits, 10 days and 10 marks)

- **Experiential Learning Programme (ELP):** 15 credits for 80 days and 75 marks

  1. Students were attached to the Department of Aquaculture and the Department Fish Processing Technology to undergo Skill Development Programmes in the fields of

preparation of aqua feeds, analysis of water and soil quality parameters and preparation of value added fishery products.

2. Students were attached to the Department of Aquaculture and the Department Fish Processing Technology to undergo Experiential learning in Fish Farming, Shrimp Farming and Fish Processing activities.

Photos of students' activities during ELP






6.4.6. Supervision of students in UG Programmes:

The Dean supervises the faculty and students' performance in the classrooms through internet enabled Closed-Circuit Television (CCTV). At present, there is dedicated CCTV cameras in all the three UG classrooms and also in the examination hall. With the help of this provision, the Dean ensures students' and teachers' time bound engagement in the class hours. The final year students are undergoing Student Ready Programme which is also being continuously monitored by the concerned department faculties.

In addition to it, for every batch of UG students, three teaching faculty have been assigned as Student Coordinator (1 No.) and Counsellor (1 No.) respectively. There is a dedicated counselling time (which is also mentioned in the academic time table) in which the aforesaid teaching faculty will appraise the students' learning progress and more

importantly get their feedback about the course teachers and their teaching skills. This counseling session is helping a lot in boosting both the teaching and learning process in the college.

6.4.7. Feedback of stakeholders (Students, parents, industries, employers, farmers, etc.):

Mentioned below is the feedback mechanism followed by the University in order to obtain feedback from the students, farmers, fisherfolk, stakeholders etc

- Feedback for each course is received from the students by the concerened course teacher at the end of each semester.
- Feedback is also received from farmers, fisherfolk, self-help groups, etc., at the end of the training programmes through a structured questionnaire.
- Follow up of the training programme is also carried out in a phased manner.
- The In-Plant Training Co-ordinator collects the feedback from industries, farms, processing plants and employers of the students, while Department of Fisheries Extension, Economics and Statistics collects the feedback from farmers who have availed training at the College. Further, the Dean interacts with the students at regular interval for seeking feedback from the students.

6.4.8. Student intake and attrition in the programme for last five years:

Yearwise information on sanctioned strength, actual intake and attrition in the last five years of the Degree Programme, are provided under in the tabular form.

Name of the Degree Programme	Actual student admitted in last five years (2016-2021)					Attrition (%)				
	2016-17	2017-18	2018-19	2019-20	2020-21	2016-17	2017-18	2018-19	2019-20	2020-21
B.F.Sc.	50	62	67	65	47	6.00	9.6	8.9	7.6	0
M.F.Sc.	19	24	33	13	22	5.263	12.50	21.212	0.00	4.545
Ph.D.	8	4	13	9	17	0.00	50.00	7.692	33.333	11.764

6.4.9. ICT Application in Curricula Delivery:

ICT is an integral part of the teaching and learning programme. For successful classroom teaching, FC&RI, Thoothukudi, has the following ICT equipment and machineries.

- Short-throw LCD projectors, electronic podiums, and safe Wi-Fi access are available in all classrooms. For successful delivery of course material, all course teachers use PowerPoint slides and other softwares.
- Furthermore, most of the course materials are currently available on FC&RI, Thoothukudi's e-learning portal (www.tnjfuelearning.in). Using their username and password, staff and students can access this e-learning portal.
- For presentations by the staff and students, the classrooms have 65-inch LED touch screens.
- In addition, the campus has video conferencing facilities for communicating with staff and scientists of other colleges and institutes.
- As a result, the institute's ICT facilities are meeting the students' needs.

6.4.10. The information pertaining to 6.4.1 to 6.4.9 shall be provided for each one of UG, PG and Ph.D., Degree Programmes, separately and to be presented College-wise.

The details for PG and Ph.D. programmes are given separately.

6.4.11. Since the accreditation of programmes is related to the All India Admission from ICAR and also having weightage for College accreditation, therefore the data presented in the section 6.4 is liable to the verification at any stage.

6.4.12. Certificate (Applicable when SSR is submitted for Programme)

I, the Dean in-charge, **Dr. N. V. SUJATHKUMAR,** hereby certify that the information contained in the Section 6.4.1 to 6.4.9 are furnished as per the records available in the college and degree awarding university.



Signature of Dean of the College with Date & Seal

TAMIL NADU Dr. J JAYALALITHAA FISHERIES UNIVERSITY

Self Study Report for Post Graduate Degree Programme (M.F.Sc. in Aquaculture)

Submitted by

Fisheries College and Research Institute,
Thoothukudi – 628 008
Tamil Nadu

6.4. Self Study Report for the Programme

6.4.1. Brief History of the Degree Programme:

The degree programme M.F.Sc. in Aquaculture was initiated during the year 1991-92 to offer courses in aquaculture subjects for PG students and to undertake basic and applied research work on various aspects of aquaculture. The major and minor courses are provided based on the ICAR syllabus.

Major Courses offered for PG:

- AQC 501- Sustainable Aquaculture 3 (2+1)
- AQC 502- Soil and Water Quality Management in Aquaculture 3 (2+1)
- AQC 503- Nutrition and Feed Technology 3 (2+1)
- AQC 504- Aquatic Animal Health Management 3 (2+1)
- AQC 506- Seed Production and Hatchery Management of Shellfishes 2 (1+1)
- AQC 509- Coastal Aquaculture 3 (2+1)
- AQC 511- Larval Nutrition and Culture of Food Organisms 2 (1+1)

6.4.2. Faculty Strength:

S. No.	Sanctioned Faculty	Faculty in place	Vacant position	Faculty recommended by the ICAR/UGC/VCI/ other regulatory bodies
1.	Professor	1	-	
2.	Associate Professor	-	-	
3.	Assistant Professor	3	-	

6.4.3. Technical and Supporting staff:

S. No.	**Sanctioned technical and supporting staff**	**Faculty in place**	**Vacant position**
1.	Fishery Assistant	2	-
2.	Sub Inspector of Fisheries	-	1
3.	Farm Manager	1	-
4.	Computer Operator	1	-
5.	Typist	-	1
6.	Attender	3	-
7.	Attendant	2	-
8.	Basic Servant	4	1

Number of class rooms	:	2
Number of functional laboratories	:	5
Major laboratories	:	• Cryopreservation Laboratory • Microbiology Laboratory • Molecular Biology Laboratory • Water Quality Laboratory • Nutrition Laboratory
Major equipments	:	• Hot plate • Cold handling unit 1 • Programmable freezer • Cryo-cans • UV Chamber • Hot Air Oven • Incubator • Water bath • Bench Top Centrifuge • Stereo Microscope • UV Spectrophotometer • Binocular Microscope • Binocular Microscope with camera • Laminar Air flow Chamber • UV Transilluminator • Electrophoresis • pH meter • Shaker • Vortex • Microwave • Weighing balance • Distillation unit • Spectrophotometer • Fiber tech • Bomb Calorimeter • Muffle Furnace • Desiccator • Centrifuge • KJeltech Apparahis
Major farm facilities	:	• Freshwater Fish Farm • Ornamental Fish Culture Unit • Glass House Aquarium • Biofloc Culture Unit • Feed Mill • Raceway system • Recirculatory Aquaculture System • Mariculture Research Farm Facility, Tharuvaikulam
Theory and practical batches for PG & PhD Degree prog.	:	1



Cage installed in reservoir at FCRI, Thoothukudi



Fishes harvested from reservoir



Biofloc Culture Unit

6.4.5 Conduct of Practical and Hands-on-Training:

The farm and laboratory facility available with the department provides necessary hands-on-practice to the PG degree students based on the syllabus provided by ICAR. All the courses are combined with 2 hours of practical session where the students are exposed to various practical aspects of the particular course. Most of the practical classes are conducted utilizing the available farm and laboratory facilities of the department. However, they are also taken for field visits to give them exposure on the current trend in the field or industry.

6.4.6. Supervision of students in PG/PhD Programmes:

Sl. No.	Name of the degree programme	Batch	Name of the student	Research Topics	Supervising Faculty
1.	M.F.Sc. Aquaculture	2016-17	K. Kaviyarasan MFT 16079	Evaluation of production performance of improved tilapia and Thai- chitralada strain of *Oreochromis niloticus*(L) in periphyton based culture system	Dr. S. Athithan
2.			Mule Akash Baburao MFT 16080	Growth performance of pacific white shrimp (*Penaeus vannamei*) with red strain tilapia under polyculture system	Dr. S. Athithan
3.			A.Priyatharshini MFT 16081	Effect of replacement of soybean meal with sesame meal and cottonseed meal in the diet of Thai- chitralada strain of *Oreochromis niloticus*	Dr. C.B.T. Rajagopalsamy
4.			S. Sebas Pandian MFT 16082	Evaluation of three different feed items for their role in enhancing maturation in *Penaeus semisulcatus* and *P. indicus*	Dr. J. Stephen Sampath Kumar
5.			V. Susitharan MFT 16083	Impact of biofloc on the nursery rearing of pearl spot *Etroplus suratensis* under flow through system	Dr. C.B.T. Rajagopalsamy
6.			M. Yogesh MFT 16084	Effect of dietary supplementation of biofloc meal and soyabean meal on the growth and survival of improved tilapia and Thai- chitralada strain of *Oreochromis niloticus*(L)	Dr. C.B.T. Rajagopalsamy
7.		2017-18	M. Muthu Abishag U-17-TN-03-002-M-F-032	Effect of cryopreservation on the spermatological parameters of different strains of *Labeo rohita*	Dr. J. Stephen Sampath Kumar

8.			Vanlalhriatpuii Chawngthu I-17-TN-03-002-M-F-047	Growth and survival for silver pompano (*Trachinotusblochii*) seeds under RAS system	Dr. J. Stephen Sampath Kumar
9.			K. Balaji U-17-TN-03-002-M-F-029	Growth performance of pacific white shrimp (*Penaeus vannamei*) with silver pompano under polyculture system	Dr. J. Stephen Sampath Kumar
10			AlishDebbarma U-17-TN-03-002-M-F-028	Evaluation of stocking parameters influencing the growth of Genetically Improved Farm Tilapia (GIFT) under intensive cage farming	Dr. J. Stephen Sampath Kumar
11.			S. Sathish U-17-TN-03-002-M-F-033	Investigation on the interactive factors causing disease incidences in the hybrid tilapia farming in the selected districts of Tamil Nadu	Dr. P. Chidambaram
12.			M. Subash Chandraboss U-17-TN-03-002-M-F-034	Effect of different feed combinations on the maturation and spawning of marine ornamental fish *Amphiprionsebae*	Dr. K. Ravaneswaran
13.			Borakhatariya Nirav Parbatbhai U-17-TN-03-002-M-F-030	Role of feeding and water quality on moulting and maturation of *Penaeus semisulcatus* under captivity	Dr. J. Stephen Sampath Kumar
14.			P. Karthick Raja U-17-TN-03-002-M-F-031	Effect of silkworm pupae (*Bombyx mori*) on the growth and maturation of Rainbow shark *Epalzeorhynchos frenatum* (Fowler, 1934) under captive rearing	Dr. S. Aanand
15.	M.F.Sc.in Aquaculture	2018-19	M.A. Harshavardhan U-18-TN-03-002-M-F-002	Role of dietary lipids on the growth and maturation fancy koi *Cyprinus carpio* var. Koi	Dr. S. Aanand

16.			Shubham Banchod U-18-TN-03-002-M-F-003	Integrating *Penaeus vannamei* (Boone, 1931) with red seaweed *Gracilaria edulis* (S.G.Gmelin) P.C.Silva, 1952: A Sustainable Alternative in Aquaculture	Dr. Cheryl Antony
17.			Sindhu, M.R. U-18-TN-03-002-M-F-004	Investigation on the relative performance of *Penaeus vannamei* larvae fed with prebiotic enriched diet in indoor rearing systems	Dr. J. Stephen Sampath Kumar
18.			Sweety Singh U-18-TN-03-002-M-F-005	Studies on the spermatological properties and standardization of cryopreservation protocol for cobia, *Rachycentronc anadum*	Dr. C. Judith Betsy
19.			Harshita Sahu U-18-TN-03-002-M-F-026	Effect of stocking parameters on growth, survival and production of *Pangasius hypophthalmus* (Sauvage, 1878) in intensive cage culture system	Dr. J. Stephen Sampath Kumar
20.			Triveni T. Shiriyappa goudar U-18-TN-03-002-M-F-027	Role of system design and stocking density on growth, survival and meat quality of silver pompano, *Trachinotu sblochii*, (Lacepede, 1801) in indoor nursery rearing	Dr. Cheryl Antony
21.	M.F.Sc in Aquaculture	2019-20	Boobalan, S. U-15-TN-03-002-B-F-045	Studies on the parameters influencing growth and production of Seabass (*Lates calcarifer*) in marine cages	Dr. C. Anand
22.			Ebcifa, S. U-15-TN-03-002-B-F-050	Studies on the growth performance of hybrid tilapia in the treated sewage of residential township	Dr. J. Stephen Sampath Kumar

23.			KenyumLollen U-15-JK-01-004-B-F-001	Evaluation of freezing protocols in the cryopreservation of C*yprinus carpio* (Linnaeus, 1758) spermatozoa	Dr. C. Judith Betsy
24.			Jeyaprakash Sabari, S. U-19-TN-03-002-M-F-001	Comparative evaluation of shrimp meal, crab meal, silkworm pupae and black soldier fly larvae-based diet on the growth performance of koi carp (*Cyprinus carpio* var. koi) in nursery phase	Dr. S. Aanand
25.			Karun Kant Yadava U-19-TN-03-002-M-F-002	Effect of *Cassia alata, Clitoriaternatea, Leucas aspera* on growth performance and haematological responses of GIFT Tilapia (*Oreochromis niloticus*)	Dr. Cheryl Antony
26.			Chetana, J.R. I-19-TN-03-002-M-F-004	Effect of stocking density on growth and survival of Asian Seabass, *Lates calcarifer* (Bloch) fry in Recirculatory Aquaculture System	Dr. K.S. Vijay Amirthara j
27.			Hari Krishna Gorkha I-19-TN-03-002-M-F-005	Evaluation of fermented manure as an ingredient in the feed for hybrid tilapia	Dr. J. Stephen Sampath Kumar
28.			Irtiqa Hamdani I-19-TN-03-002-M-F-006	Comparative study on the growth, haematology and digestive enzyme activity of GIFT Tilapia (*Oreochromis niloticus*) using Celery (*Apium graveolens*), Fenugreek (*Trigonella foenum-graecum*) and Coriander (*Coriandrum sativum*) incorporated diets.	Dr. Cheryl Antony

29.	M.F.Sc. in Aquaculture	2020-21	BhenkateshPadhan I-20-TN-03-002-M-F-009	Biofloc meal as a supplementary feed ingredient replacing fish meal in the diets of rohu (*Labeo rohita*) (Hamilton, 1822)	Dr. S. Athithan
30			S. Mithun Kumar U-16-TN-03-002-B-F-064	Effect of silkworm pupae meal on the growth performance of silver pompano	Dr. J. Jaculine Pereira
31			U. Prasanna U-16-TN-02-003-B-F-072	Effect of dietary supplementation of selenium and manganese on the feed utilization and enzyme profile in *Penaeus vannamei*	Dr. C. Judith Betsy
32			M. Sivakumar U-16-TN-02-003-B-F-080	Effect of dietary organic acids and organic acid blend (OAB) on the growth performance and immunity of juvenile Pacific white shrimp, *Penaeus vannamei*, (Boon,1931) reared in lined ponds	Mr.K.S.Vijay Amirtharaj
33			A.Velmurugan U-20-TN-03-002-M-F-003	Effect of pH and Temperature on the captive breeding of Indian spiny loach (Lepidocephalichthys thermalis, Valenciennes, 1846)	Dr. J. Stephen Sampath Kumar
34.			B. Ramji U-20-TN-03-002-M-F-001	Effect of Shrimp head meal, Silkworm pupae, and crab meal on the growth and digestive enzyme profile of Etroplus suratensis (Bloch, 1790)	Dr. S. Aanand
35.			C. Sowmiya U-20-TN-03-002-M-F-002	Evaluation of stocking parameters influencing the growth of Piractus brachypomus (pacu) under the intensive cage farming	Dr. V. Senthilkumar

6.4.7. Feedback of stakeholders (Students, parents, industries, employers, farmers etc.)

The effectiveness of the degree programme is assessed through questionnaires and student counselling by PG coordinator and advisory committee.

6.4.8. Student intake and attrition in the programme for last five years:

Sl.No	Actual student admitted in last five years					Attrition (%)				
1	2016	2017	2018	2019	2020	2016	2017	2018	2019	2020
2	06	08	07	08	08	0	0	12.50	0	12.50

6.4.9. ICT Application in Curricula Delivery:

The degree programme uses ICT in teaching and practical and the classrooms are equipped in such a way to promote ICT usage. WiFi is available in the Department and the students use the facility for their academics.

Certificate

I, the Dean in-charge, **Dr. N.V. Sujathkumar** hereby certify that the information contained in the Section 6.4.1 to 6.4.9 are furnished as per the records available in the college, and degree awarding University.



Signature of the Dean of the collegewith Date & Seal

TAMIL NADU Dr. J JAYALALITHAA FISHERIES UNIVERSITY

Self Study Report for Doctoral Degree Programme

(Ph.D. in Aquaculture)

Submitted by

Fisheries College and Research Institute,
Thoothukudi – 628 008
Tamil Nadu

6.4. Self Study Report for the Programme

6.4.1. Brief History of the Degree Programme:

The degree programme, Ph.D. programme in Aquaculture was initiated during 1989-90 to offer courses in aquaculture subjects for Ph.D. students and to undertake basic and applied research work on various aspects of aquaculture. The major and minor courses are provided based on the ICAR syllabus.

Major Courses offered for P.hD. :

- AQC 601- Advances in Aquaculture Production Systems 3 (2+1)
- AQC 602- Advances in Seed Production and Hatchery Management 3 (2+1)
- AQC 603- Aquaculture and Ecosystem Management 3 (2+1)
- AQC 606- Advances in Fish Genetics 3 (2+1)
- AQC 607- Intensive Farming Systems for Tilapia and Catfishes 3 (2+1)

6.4.2. Faculty Strength:

S. No.	Sanctioned Faculty	Faculty in place	Vacant position	Faculty recommended by the ICAR/UGC/VCI/ other regulatory bodies
1.	Professor	1	-	1
2.	Associate Professor	-	-	2
3.	Assistant Professor	3	-	3

6.4.3.Technical and Supporting staff :

S. No.	Sanctioned technical and supporting staff	Faculty in place	Vacant position
1.	Fishery Assistant	2	-
2.	Sub Inspector of Fisheries	-	1
3.	Farm Manager	1	-
4.	Computer Operator	1	-
5.	Typist	-	1
6.	Attender	3	-
7.	Attendant	2	-
8.	Basic Servant	4	1

6.4.4. Classrooms and Laboratories:

Number of class rooms	:	2
Number of functional laboratories	:	5
Major laboratories	:	• Cryopreservation Laboratory • Microbiology Laboratory • Molecular Biology Laboratory • Water Quality Laboratory • Nutrition Laboratory

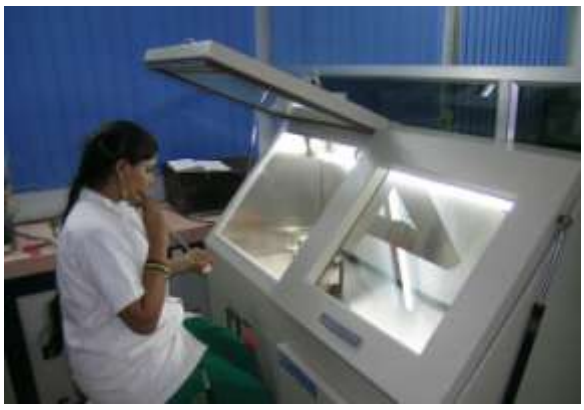
Major equipments	:	• Hot plate • Cold handling unit 1 • Programmable freezer • Cryo-cans • UV Chamber • Hot Air Oven • Incubator • Water bath • Bench Top Centrifuge • Stereo Microscope • UV Spectrophotometer • Binocular Microscope • Binocular Microscope with camera • Laminar Air flow Chamber • UV Transilluminator • Electrophoresis • pH meter • Shaker • Vortex • Microwave • Weighing balance • Distillation unit • Spectrophotometer • Fiber tech • Bomb Calorimeter • Muffle Furnace • Desiccator • Centrifuge • KJeltech Apparahs
Major farm facilities	:	• Freshwater Fish Farm • Ornamental Fish Culture Unit • Glass House Aquarium • Biofloc Culture Unit • Feed Mill • Raceway system • Recirculatory Aquaculture System • Mariculture Research Farm Facility, Tharuvaikulam
Theory and practical batches for PG & PhD Degree Programme	:	1



Farm pond



Fishes harvested from reservoir



Cryopreservation laboratory

6.4.5 Conduct of Practical and Hands-on-Training:

The farm and laboratory facility available with the department provides necessary hands-on-practice to the PhD degree students based on the syllabus provided by ICAR. All the courses are combined with 2 hours of practical session where the students are exposed to various practical aspects of the particular course. Most of the practical classes are conducted utilizing the available farm and laboratory facilities of the department.

However, they are also taken for field visits to give them exposure on the current trend in the field or industry.

6.4.6. Supervision of students in PhD Programmes:

Sl. No.	Name of the degree programme	Batch	Name of the student	Research Topics	Supervising Faculty
1.	Ph.D.	2017-18	Chavadi Harini U-17-TN-03-002-D-F-002	Studies on the maturation and spermatology of *Penaeus semisulcatus* brooders developed in captivity and cryopreservation of spermatophore	Dr. J. Stephen Sampath Kumar
2.	Ph.D.	2018-19	K.V. Anjusha U-18-TN-03-002-D-F-001	Comparative analysis on bioenrichment of live feeds and their applications in *Penaeus vannamei* (Boone, 1931) post larvae rearing	Dr. Cheryl Antony
3.	Ph.D.		Bhosle Rameshwar Venkatrao U-18-TN-03-002-D-F-002	Evaluation of hormone bio-enriched live feeds in the all-male production of hybrid tilapia (red strain)	Dr. J. Stephen Sampath Kumar
4.	Ph.D.		Padala Dharmakar U-18-TN-03-002-D-F-003	Assessment of solid-state fermented meals of cotton seed, sunflower seed and dried brewery waste on the growth and survival of Rohu (*Labeo rohita*) in nursery phase	Dr. S. Aanand
5.	Ph.D.		Pankaj Gargotra I-18-TN-03-002-M-F-010	Role of selected vitamins and minerals on the maturation and induced spawning of L*epidocephalichthys thermalis* (Valenciennes, 1846)	Dr. J. Stephen Sampath Kumar
6.	Ph.D	2019-20	Swapna Behera	Assessment of selected dietary mineral requirements and their responses on growth and	Dr. N. Felix

				haematology of *Penaeus vannamei* (Boone, 1931) reared in low salinity waters	
7.	Ph.D	2020-21	Raswin Geoffery U-20-TN-03-002-D-F-001	Nutritional evaluation of black soldier fly larvae (*Hermetia illucens*) and water hyacinth (*Eichhornia crassipes*) as a replacement of fish meal in the diets of GIFT Tilapia	Dr. S. Athithan

6.4.7. Feedback of stakeholders (Students, parents, industries, employers, farmers etc.):

The effectiveness of the degree programme is assessed through questionnaires and student counselling by PG coordinator and advisory committee.

6.4.8. Student intake and attrition in the programme for last five years:

Sl.No	Actual student admitted in last five years					Attrition (%)				
1	2016	2017	2018	2019	2020	2016	2017	2018	2019	2020
2	0	01	04	02	03	0	0	0	50	66.67

6.4.9. ICT Application in Curricula Delivery:

The degree programme uses ICT in teaching and practical and the classrooms are equipped in such a way to promote ICT usage. WiFi is available in the Department and the students use the facility for their academics.

Certificate

I, the Dean in-charge, **Dr. N. V. Sujathkumar** hereby certify that the information contained in the Section 6.4.1 to 6.4.9 are furnished as per the records available in the college, and degree awarding University.

DEAN i/c
Fisheries College and Research Institute
Tamil Nadu Dr. J. Jayalalithaa Fisheries University
Thoothukudi - 628 008

Signature of the Dean of the college with Date & Seal

TAMIL NADU Dr. J JAYALALITHAA FISHERIES UNIVERSITY

Self Study Report for Post Graduate Degree Programme (M.F.Sc. in Fisheries Resource Management)

Submitted by

Fisheries College and Research Institute,
Thoothukudi – 628 008
Tamil Nadu

6.4. SELF STUDY REPORT FOR THE POST GRADUATE DEGREE PROGRAMME - M.F.Sc IN FISHERIES RESOURCE MANAGEMENT

6.4.1. BRIEF HISTORY OF THE M.F.Sc. IN FISHERIES RESOURCE MANAGEMENT DEGREE PROGRAMME:

The Department of Fisheries Biology and Resource Management started functioning since the inception of Fisheries College and Research Institute at Thoothukudi during 1977 and is one of the pioneering and basic units of the Institute. The Department is involved in teaching, research and extension activities pertaining to fisheries biology and resource management. Presently, the faculties of the department offer eight courses for the B.F.Sc. degree programme. In addition, the department offers M.F.Sc. and Ph.D. programmes in Fisheries Resource Management. Besides teaching, the department also undertakes research projects on fisheries biology, molecular taxonomy of finfish and shellfish, population dynamics and stock assessment of finfish and shellfish and extension activities on sustainable fisheries and aquatic biodiversity conservation related issues.

Initially, the department offered four courses for the common Master degree programme (M.F.Sc.) in Fisheries Science from 1982 to 1990. Later, with a view to produce experts in the field of fisheries biology, M.F.Sc degree programme in Fisheries Biology [M.F.Sc (Fisheries Biology)] was introduced during 1990. Following the ICAR guidelines for the PG programme, the PG degree was renamed as M.F.Sc (Fisheries Resource Management) in 2011.

PG Courses

The following ten courses (7 major + 3 minor) are offered under semester system for M.F.Sc. (FRM)

Sl.No.	Course No.	Title of the Course	Credit Hours
Major course			
1.	FRM 501	Inland Fisheries Resources	3(2+1)
2.	FRM 502	Marine Fisheries Resource Management	3(2+1)
3.	FRM 503	Marine Ecosystem, Biodiversity and Conservation	3(2+1)
4.	FRM 504	Tropical Fish Stock Assessment	3(2+1)
5.	FRM 506	Remote Sensing and GIS for Fisheries Management	3(2+1)
6.	FRM 509	Feeding and Reproductive Biology of Finfish	3(2+1)

		and Shellfish	
7.	FRM 512	Modern Techniques in Ichthyotaxonomy	3(2+1)
		Total	21 (14+7)
Minor course			
1.	FRM 505	Fisheries Regulations	3(2+1)
2.	FRM 508	Aquatic Floral Resources	3(2+1)
3.	FRM 510	Developmental Biology of Finfish and Shellfish	3(2+1)
		Total	9 (6+3)

M.F.Sc (2015-16)

S.No	Department	Name of the faculty	Number of students guided
1	Fisheries Resource Management	Dr. S. David Kingston	1
		Dr. P. Jawahar	1
		Dr. N. Jayakumar	1

M.F.Sc (2016-17)

S.No	Department	Name of the faculty	Number of students guided
1	Fisheries Resource Management	Dr. N. Jayakumar	2
		Dr. S. David Kingston	1

M.F.Sc (2017-18)

S.No	Department	Name of the faculty	Number of students guided
1	Fisheries Resource Management	Dr. P. Jawahar	2

M.F.Sc (2018-19)

S.No	Department	Name of the faculty	Number of students guided
1	Fisheries Resource Management	Dr. P. Jawahar	2
		Dr. S. David Kingston	2

M.F.Sc (2019-20)

S.No	Department	Name of the faculty	Number of students guided
1	Fisheries Resource Management	Dr. S. David Kingston	1* (ICAR Candidate)

M.F.Sc (2020-21)

S.No	Department	Name of the faculty	Number of students guided
1	Fisheries Resource Management	Dr. V.K. Venkataramani	2

6.4.2. FACULTY STRENGTH:

The faculty strength of Department of Fisheries Resource Management is shown in the table below:

Sl. No	Name of the posts	Sanctioned strength	Staff in Position	No. of vacancy	Recommendation of V Dean's committee
1.	Professor	-	-	-	1
2.	Associate Professor	1	1*	-	2
3.	Assistant Professor	3	3**	-	3
*One retired professor has been placed as Adjunct Professor against the post of Associate Professor ** The Associate Professor and Head of the Department has been shown against a post of Assistant Professor					

6.4.3. TECHNICAL AND SUPPORTING STAFF:

The details of technical and supporting staff in the department are as follows:

S. No	Name of the posts	Sanctioned strength	Staff in position	No. of vacancy	Name of the incumbents holding the post
1.	Museum Curator	1	1	0	Th. S. Delection
2.	Typist	1	1	1	*Th. T. AshokKumar
3.	Attendant	1	1	0	Th. P. Murali

4.	Sub Inspector of Fisheries	1	1	1	**Mr. A. Sankara Avudaiappan, Laboratory Assistant, Dept. of FQ&AM
* As per the Registrar's order, one typist on contractual basis has been engaged for a period of one year from 07.03.2020 to 06.03.2021 ** As per the Registrar's order, Mr. A. Sankara Avudaiappan has been engaged on Contract basis against the vacant post of Sub-Inspector of Fisheries held in the Dept. of FBRM for a period of one year from 17.03.2020 to 16.03.2021					

Workers on Daily Wage Basis (Coolie)

S. No	Name of the posts	Place of work	Nature of work
1.	Coolie – Mr. Isakkidurai	Fisheries Museum	To look after the maintenance of the museum
2.	Coolie – Mr. Anto	Shore lab Field Research Facility	To look after the live animals

6.4.4. CLASSROOMS AND LABORATORIES:

No. of class rooms available for PG programme: One smart classroom with facilities to use ICT tools

The Department has an UG Laboratory, a PG Laboratory and a wet-lab. In addition, there is a Fisheries Biodiversity Museum.

Infrastructure / Equipment Facilities Developed

UG and PG Laboratories:

There are two laboratories (1 UG Lab & 1 PG Lab) for both teaching and research programmes. The UG biology laboratory is provided with ten laboratory tables for conducting practical class on taxonomy, anatomy and biology. The instruments available for teaching and research purposes include a stereoscopic zoom microscope, trinocular Nikon advanced research microscope with micro-photographic attachment, visualizer cum projector, underwater video-camera, Fry's Modified Respirometer, ELISA Reader, Electrofisher, Spectrophotometer etc.

Bioactive Substance Screening Facility:

A facility for screening bioactive substances from marine organisms has been established under Part II scheme. Equipment like vertical ultra-low freezer, vacuum evaporator, refrigerated ultra-centrifuge, iso-electric focusing cell, laminar flow chamber, gel electrophoresis unit, incubator, hot air oven and analgesic meter (hot plate model) are available in the unit. This facility is used by both staff and students to carry out research on screening bioactive substances from molluscs, sponges, seaweeds etc.

PG Class Room:

There is a PG class room, attached to the Department of Fisheries Biology and Resource Management to teach the students pursuing M.F.Sc (FRM) and Ph.D (FRM).

Fisheries Museum

A Fisheries Museum that houses about 1000 specimens of various aquatic organisms such as finfishes, shellfishes, corals, sponges, reptiles, mammals etc. is maintained by the department. Skeletal systems of two different whale species and stuffed specimens of dolphins, finfishes and aquatic birds are also available. The specimens are used to teach courses like taxonomy of finfish and taxonomy of shellfish. In addition, the visitors of the museum are educated about the value of aquatic biodiversity and the need for proper conservation and management of aquatic resources by displaying the specimens in see-through racks.



School students' visit



College students' visit



Sei whale – Skeletal Specimen



Finfish Specimens



Sperm whale - Skeleton Specimen

Wet Laboratory

A wet lab is available for the students of M.F.Sc (FRM) and Ph.D (FRM) to carry out their dissertation work involving maintenance of live animals. FRP tanks and plastic tubs are available for maintaining live animals.

Histology Laboratory:

A histology unit has been established under a DBT scheme to carry out research on histological and endocrinological studies. Equipment like automatic tissue processor, manual microtome, tissue embedder, digital image processor, ELISA Reader, micro centrifuge, tissue floatation bath, heating mantle and flow through system are available for the use of the PG students. This laboratory is also used to carry out research under externally funded projects by the faculty and dissertation work by M.F.Sc. and Ph.D students.

Renovated Shore Lab Field Research Facility (SRFF):

This is one of the off-campus facilities of The University which has been established in the Fishing Harbour Campus, Thoothukudi. It was initially established under Dept. of Ocean Development, New Delhi during 1991 – 1994. Recently, this research facility was renovated under university funding to facilitate P.G. students in their research work on growth and reproductive biology of marine fish species.






UG Laboratory




PG Classroom




PG Laboratory




Museum






Laboratory and Equipments








LABORATORIES AND EQUIPMENT:

The following major instruments / Equipment are available for teaching and research purposes.

S.No	Name of the Equipment	Qty	Utility / Purpose
1	Tissue Processor	1	Used to teach and demonstrate preparation of histological slides and observation and interpretation of slides to the UG and PG students. Further, they are used to carry out research projects.
2	Tissue Embedder and Cold Plate	1	
3	Microtome	1	
4	Microscope with Image Processing System	1	
5	Rotary Evaporator	1	Used to recover solvent
6	ELISA Reader Bio Tek ELX 800	1	Used for reading hormone quantity and DNA purity
7	Nikon Microscope- model E50i	1	Used to observe tissues and larvae
8	New Brunswick Premium Ultra low temperature vertical freezer	1	Used to store fish and tissue samples
9	Refrigerated centrifuge Eppendorf 5804R	1	Used to conduct biochemical tests
10	Double distillation Unit	1	Used to produce distilled water for preparing various solutions
11	Incubator	1	General laboratory purpose
12	Hot air oven	1	General laboratory purpose

13	Laminar flow chamber	1	For conducting experiment under aseptic condition and carryout microbiological experiments for PG studies
14	Gel documentation system	1	For studying gel band
15	Electrophoresis unit	2	To perform protein characterization
16	UV vis Spectrophotometer	1	To perform essential water quality parameter and quantification of solution
17	Underwater video-camera	1	To observe and record coastal marine fauna and flora
18	Iso-electric focusing cell	1	For studying the protein character of fishes
19	Visualiser cum Image presenter (Model No. TC-10P)	1	Used to teach and demonstrate dissected specimen to show internal anatomical parts to the UG and PG students.

RESEARCH DETAILS:

The faculty of the department has undertaken research projects on aquatic biodiversity assessment, biology of aquatic animals, impact of trawling on aquatic biodiversity, impact of large-scale cultivation of seaweeds on coastal environment, effects of Kisspeptin hormones on reproductive hormone levels in murrel, mullet diversity, reproductive biology of scats etc. In addition, a NADP scheme on "Generation of alternative livelihood options for fisherfolk towards aquatic biodiversity conservation" was also undertaken.

A. Students' Research

M.F.Sc. (FRM): Completed

S. No	Name of the Student	Title of the Research
1.	J Canciyal MFT 1326 (FRM) 2015	Effect of Fucoidan incorporated diet on growth and immune response of giant freshwater prawn *Macrobrachium rosenbergii*
2.	Lakkshme Gayathre MFT 1327 (FRM) 2015	Effect of HCG Implants on Gonadal Maturity of Mrigal (*Cirrhinus mrigala*)
3.	Neetha Shenoy MFT 1328 (FRM) 2015	Effect of Synthetic Kisspeptin-10 on induced breeding of of Mrigal (*Cirrhinus mrigala*)
4.	K Karuppasamy MFT 14042 (FRM) 2016	Biodiversity of fish species along Wadge bank South India

5.	Prateek MFT 14043 (FRM) 2016	Eco-biology of fish community along low land stream of Pechiparai reservoir
6.	V Vidhya MFT 14044 (FRM) 2016	Population biology and stock assessment of selected *Portunus* species of Gulf of Mannar
7.	T Kalaiarasi MFT 15067 (FRM) 2017	Study on histological alterations in selected wild fish population inhabiting sewage disposal site in Threspuram off Thoothukudi Southeast Coast of India
8.	Patadiya Dhawal SureshBhai MFT 15068 (FRM) 2017	Studies on Biology and Stock Assessment of Anchovies Landed at Thoothukudi
9.	C Sudhan MFT 15069 (FRM) 2017	Ichthyofaunal diversity of Pechiparai reservoir Kanyakumari district
10.	K L Brema MFT 16095 (FRM) 2018	Biology and Stock Assessment of Labeo fimbriatus (Bloch 1795) and Labeo calbasu (Hamilton 1822) along the lower stretches of Tamiraparani river
11.	E Kayalvizhi MFT 16096 (FRM) 2018	Assessment of biodiversity and analysis of fishing pattern of Beloniform fishes along Thoothukudi coast
12.	V Sahaya Vilovetheen Thilaka MFT 16097 (FRM) 2018	Biodiversity and biology of sharks along south Tamil Nadu Coast
13.	Palani Eshwar Chandra Vidya Sagar U-17-TN-03-002-M-F-043 2019	Reproductive hormone profile and gonadal maturation of *Siganus* species
14.	R Tamil Selvan U-17-TN-03-002-M-F-044 2019	Studies on growth characteristics of *Siganus* species
15.	Kalithkar Bheemeswarrao I-18-TN-03-002-M-F-028 2021	Biology and life history characteristic of selected deepsea fishes including otolith
16.	A Sivaramachandran I-18-TN-03-002-M-F-033 2021	Diversity Fishery and Population biology of selected Barracudas (Family: Sphyraenidae) off Gulf of Mannar Coast

A. Completed Research Projects:

Sl.No	Title of the Project	Year	PI & Co-PIs of the Projects	Amount	Funding Agency
1.	Appraisal of marine fish landings of Tamilnadu.	2018 - 2019	PI – Dr. P. Jawahar Co-PI – Mr. P. Pavinkumar	Rs.8.33 lakh	Handy – Water base India (P) Ltd, Tuticorin.
2.	Establishment of deep sea fishing technology training and management center at Thoothukudi and Thoothoor	2018 – 2019	Co-PI – Dr. P. Jawahar	Rs.382.0 lakh	Dept. of Animal Husbandry, Dairying and Fisheries.
3	Assessment of fishing pattern	2017	Co-PIs –	Rs.21.00	NABARD

	and fishing pressure in Gulf of Mannar	- 2018	Dr. P. Jawahar Dr. S. David Kingston	lakhs	(NAFFC)
4	Resource Management and conservation of Kombuthurai through co-management	March 2016 - March 2018	PI: Dr. P. Jawahar	Rs.4.99 lakhs	Tamil Nadu State Fisheries Department under FIMSUL II
5	Establishment of marine finfish hatchery system at Mandapam	31.12.14 to 31.03. 17	PI: Dr. P. Jawahar	Rs.1.85 crores	NADP Scheme
6	Impact of large scale cultivation of seaweeds on coastal environment of India	14.11.13 to 31.03.16	Co-PIs: Dr. P. Jawahar Dr. N. Jayakumar	Rs. 47.24 lakhs	NCSCM, Chennai
7	Development of Technologies for hatchery production of Marine gastropods and Ornamental fishes at Lakshadweep and Gulf of Mannar Islands- sea ranching and technology transfer to coastal and island communities'.	2008 - 2012	PI: Dr. P. Jawahar	Rs. 33.39 lakhs	Ministry of Earth Science, Government of In
8	Generating alternative livelihood options for the coastal community towards biodiversity conservation in Tamilnadu.	2011 - 2012	PI: Dr. N. Jayakumar	Rs.24.85 lakhs	NADP Scheme
9	Environmental factors influencing spatiotemporal variation of fish and shellfish eggs and larvae of Gulf of Mannar.	2011 - 2012	PI: Dr. P. Jawahar	Rs.7.60 lakhs	Gulf of Mannar Biosphere Trust, Ramanathapuram
10	Effect of kisspeptin on change in level of reproductive hormones and gonadal maturation in an air breathing fish, *Channa striatus*	2010 - 2013	PI – Dr. T. Franchis Co-PI – Dr. N. Jayakumar	Rs.49.32 lakhs	DBT, New Delhi
11	Molluscan diversity of Gulf of Mannar Biosphere Reserve Region and its current exploitation rate in different fishing practices sponsored by Gulf of Mannar Biosphere Reserve Trust, Ramanathapuram	2010 - 2013	PI – Dr. V. K. Venkataramani Co-PI – Dr. N. Jayakumar	Rs.2.70 lakhs	TANUVAS, Chennai

12	Impact of trawling in Gulf of Mannar Biosphere Trust region - sponsored by Gulf of Mannar Biosphere Reserve Trust, Ramanathapuram	2010 - 2013	Co-PI: Dr. N. Jayakumar	Rs.2.50 lakhs	TANUVAS, Chennai

B. Ongoing research project: Nil

C. Research Project Proposal Submitted / Sanctioned:

Sl. No.	Title of the Project	Year	PI & Co- PI of the Project	Budget(in Lakhs)	Funding Agency
1.	Study on spawning seasonality of major marine fishery groups along the coast of Tamil Nadu for sustainable fishery management	2021	N. Jayakumar (PI)	Rs. 146.8 Lakh	Govt. of Tamil Nadu
2.	Digital solutions for sea turtle conservation in south east coast of Tamil Nadu	2021	C. Sudhan (PI)	Rs 2 Lakh	TNJFU

6.4.5. CONDUCT OF PRACTICAL AND HANDS-ON-TRAINING:

During the course work in the first two semesters of M.F.Sc. (FRM) the practical classes are conducted in the PG laboratory, SRFF and museum. In addition, students are taken to the field like seashore, fishing harbours, fish markets and various fisheries organizations like CMFRI, MPEDA, State Fisheries Department etc. to enable them to gain field exposure and hands-on experience. Furthermore, the PG students carry out their lab-based dissertation work in the PG laboratory and Wet-lab. The students those who collect data and conduct survey in the field as part of their dissertation work are facilitated in collection of field data and conducting survey in the field.

6.4.6. SUPERVISION OF STUDENTS IN PG PROGRAMMES:

A faculty in the cadre of Professor serves as PG Coordinator for coordinating the academic and research activities of all the PG students of the Institute. At Department level, a Student's Advisory Committee consisting of a Chairman (Major Advisor) and two members is constituted for each PG student separately to guide them from proposing the research work till the final viva-voce examination.

COMPLETED

S. No	Name of the Student	Title of the Research	Name and designation of the Chair / Major Advisor
1.	J Canciyal MFT 1326 (FRM) 2015	Effect of Fucoidan incorporated diet on growth and immune response of giant freshwater prawn *Macrobrachium rosenbergii*	Dr. P. Jawahar Controller of Examinations; TNJFU Nagapattinam.
2.	Lakkshme Gayathre MFT 1327 (FRM) 2015	Effect of HCG Implants on Gonadal Maturity of Mrigal (*Cirrhinus mrigala*)	Dr. T. Francis Professor and Head (Retd); Department of Fisheries Biology and Resource Management; TNJFU-FCRI Thoothukudi.
3.	Neetha Shenoy MFT 1328 (FRM) 2015	Effect of Synthetic Kisspeptin-10 on induced breeding of Mrigal (*Cirrhinus mrigala*)	Dr. T. Francis Professor and Head (Retd); Department of Fisheries Biology and Resource Management; TNJFU-FCRI Thoothukudi.
4.	K Karuppasamy MFT 14042 (FRM) 2016	Biodiversity of fish species along Wadge bank South India	Dr. S. David Kingston Professor and Head (Retd); Department of Fisheries Biology and Resource Management; TNJFU-FCRI Thoothukudi.
5.	Prateek MFT 14043 (FRM) 2016	Eco-biology of fish community along low land stream of Pechiparai reservoir	Dr. S. David Kingston Professor and Head (Retd); Department of Fisheries Biology and Resource Management; TNJFU-FCRI Thoothukudi.
6.	V Vidhya MFT 14044 (FRM) 2016	Population biology and stock assessment of selected *Portunus* species of Gulf of Mannar	Dr. P. Jawahar Controller of Examinations; TNJFU Nagapattinam.
7.	T Kalaiarasi MFT 15067 (FRM) 2017	Study on histological alterations in selected wild fish population inhabiting sewage disposal site in Threspuram off Thoothukudi Southeast Coast of India	Dr. N. Jayakumar Associate Professor and Head Department of Fisheries Biology and Resource Management; TNJFU-FC&RI; Thoothukudi

8.	Patadiya Dhawal SureshBhai MFT 15068 (FRM) 2017	Studies on Biology and Stock Assessment of Anchovies Landed at Thoothukudi	Dr. P. Jawahar Controller of Examinations; TNJFU Nagapattinam.
9.	C Sudhan MFT 15069 (FRM) 2017	Ichthyofaunal diversity of Pechiparai reservoir Kanyakumari district	Dr. S. David Kingston Professor and Head (Retd); Department of Fisheries Biology and Resource Management; TNJFU-FCRI Thoothukudi.
10.	K L Brema MFT 16095 (FRM) 2018	Biology and Stock Assessment of *Labeo fimbriatus* (Bloch 1795) and *Labeo calbasu* (Hamilton 1822) along the lower stretches of Tamiraparani river	Dr. S. David Kingston Professor and Head (Retd); Department of Fisheries Biology and Resource Management; TNJFU-FCRI Thoothukudi.
11.	E Kayalvizhi MFT 16096 (FRM) 2018	Assessment of biodiversity and analysis of fishing pattern of Beloniform fishes along Thoothukudi coast	Dr. N. Jayakumar Associate Professor and Head Department of Fisheries Biology and Resource Management; TNJFU-FC&RI; Thoothukudi
12.	V Sahaya Vilovetheen Thilaka MFT 16097 (FRM) 2018	Biodiversity and biology of sharks along south Tamil Nadu Coast	Dr. N. Jayakumar Associate Professor and Head Department of Fisheries Biology and Resource Management; TNJFU-FC&RI; Thoothukudi
13.	Palani Eshwar Chandra Vidya Sagar U-17-TN-03-002-M-F-043 2019	Reproductive hormone profile and gonadal maturation of *Siganus* species	Dr. P. Jawahar Controller of Examinations; TNJFU Nagapattinam.
14.	R Tamil Selvan U-17-TN-03-002-M-F-044 2019	Studies on growth characteristics of *Siganus* species	Dr. P. Jawahar Controller of Examinations; TNJFU Nagapattinam.

15.	Kalithkar Bheemeswarrao I-18-TN-03-002-M-F-028 2021	Biology and life history characteristic of selected deepsea fishes including otolith	Dr. S. David Kingston Professor and Head (Retd); Department of Fisheries Biology and Resource Management; TNJFU-FCRI Thoothukudi.
16.	A Sivaramachandran I-18-TN-03-002-M-F-033 2021	Diversity Fishery and Population biology of selected Barracudas (Family: Sphyraenidae) off Gulf of Mannar Coast	Dr. P. Jawahar Controller of Examinations; TNJFU Nagapattinam.

6.4.7. FEEDBACK OF STAKEHOLDERS (STUDENTS, PARENTS, INDUSTRIES, EMPLOYERS, FARMERS etc.):

The students are provided with a feedback form at the end of the degree programme to collect their opinion / remarks on teaching, research, guidance provided, facilities available etc. in the department. Based on the feedback of the students, modifications are made in the department when needed.

STUDENT INTAKE AND ATTRITION IN THE PROGRAMME FOR LAST FIVE YEARS:

Name of the Degree Programme	**Actual student admitted in last five years**					**Attrition (%)**				
M.F.Sc **Fisheries Resource Management**	2016-17	2017-18	2018-19	2019-20	2020-21	2016-17	2017-18	2018-19	2019-20	2020-21
	3	2	4	1	2	0	0	0	0	0

6.4.9. ICT APPLICATION IN CURRICULA DELIVERY:

Since ICTs provide greater opportunity for both teachers and students to adjust learning and teaching to individual needs, ICT application has been integrated in our Institute's educational system. Our campus has been wi-fi enabled and hence the students can surf through internet 24x7 for literature survey for their research work; for collection of notes and for preparation of assignments. Further, teachers make PowerPoint presentations and show videos

while teaching. Likewise students also present seminar using the power points. The students are guided through online platforms when need arises.

Certificate

I, the Dean in-charge, **Dr. N.V. Sujathkumar** hereby certify that the information contained in the Section 6.4.1 to 6.4.9 is furnished as per the records available in the college, and degree awarding university.



Signature of the Dean of the college with Date & Seal

TAMIL NADU Dr. J JAYALALITHAA FISHERIES UNIVERSITY

Self Study Report for Doctoral Degree Programme (Ph.D. in Fisheries Resource Management)

Submitted by

Fisheries College and Research Institute,
Thoothukudi – 628 008
Tamil Nadu

6.4. SELF STUDY REPORT FOR THE POST GRADUATE DEGREE PROGRAMME – Ph.D. IN FISHERIES RESOURCE MANAGEMENT

6.4.1. BRIEF HISTORY OF THE Ph.D. IN FISHERIES RESOURCE MANAGEMENT DEGREE PROGRAMME:

The Department of Fisheries Biology and Resource Management started functioning since the inception of Fisheries College and Research Institute at Thoothukudi during 1977 and is one of the pioneering and basic units of the Institute. The Department is involved in teaching, research and extension activities pertaining to fisheries biology and resource management. Presently, the faculties of the department offer eight courses for the B.F.Sc. degree programme. In addition, the department offers M.F.Sc. and Ph.D programmes in Fisheries Resource Management. Besides teaching, the department also undertakes research projects on fisheries biology, molecular taxonomy of finfish and shellfish, population dynamics and stock assessment of finfish and shellfish and extension activities on sustainable fisheries and aquatic biodiversity conservation related issues.

Ph.D. Courses

The Doctoral Programme (Ph.D) in Fisheries Biology and Capture Fisheries was started in 1989. Later, the title was renamed as Fisheries Resource Management in 2011 and since then, Ph.D (Fisheries Resource Management) is offered by the Department. The following seven courses (5 major + 2 minor) are offered under semester system for Ph.D. (FRM).

Sl.No	Course No.	Title of the courses	Credit hrs.
1.	FRM 601	Assessment of Aquatic Biodiversity	3 (2+1)
2.	FRM 602	Applications of Fisheries Models in Stock Assessment	3 (2+1)
3.	FRM 603	Conservation and Management of Exploited Fisheries resources	3 (2+1)
4.	FRM 604	Coral Reef Management	3 (2+1)
5.	FRM 606	Fisheries Environmental Assessment	3 (2+1)
	Minor courses		
1.	FRM 605	Data collection and Estimation of Exploited Fisheries Resources	2 (0+2)
2.	FRM 607	Issues in Capture Fisheries	2 (1+1)

Ph.D. (2015-16)

S.No	Department	Name of the faculty	Number of students guided
1	Fisheries Resource Management	Dr. P. Jawahar	2

Ph.D. (2016-17)

S.No	Department	Name of the faculty	Number of students guided
1	Fisheries Resource Management	Dr. P. Jawahar	2

Ph.D. (2017-18)

S.No	Department	Name of the faculty	Number of students guided
1	**Fisheries Resource Management**	**--**	**--**

Ph.D. (2018-19)

S.No	Department	Name of the faculty	Number of students guided
1	Fisheries Resource Management	Dr. P. Jawahar	2
		Dr. S. David Kingston	1* (ICAR Candidate)

Ph.D. (2019-20)

S.No	Department	Name of the faculty	Number of students guided
1	Fisheries Resource Management	--	--

Ph.D. (2020-21)

S.No	Department	Name of the faculty	Number of students guided
1	Fisheries Resource Management	Dr. P. Jawahar	2

6.4.2. FACULTY STRENGTH:

The faculty strength of Department of Fisheries Resource Management is shown in the table below:

Sl. No	Name of the posts	Sanctioned strength	Staff in Position	No. of vacancy	Recommendation of V Dean's committee
1.	Professor	-	-	-	1

2.	Associate Professor	1	1*	-	2
3.	Assistant Professor	3	3**	-	3

*One retired professor has been placed as Adjunct Professor against the post of Associate Professor

** The Associate Professor and Head of the Department has been shown against a post of Assistant Professor

6.4.3. TECHNICAL AND SUPPORTING STAFF:

The details of technical and supporting staff in the department are as follows:

S. No	Name of the posts	Sanctioned strength	Staff in position	No. of vacancy	Name of the incumbents holding the post
1.	Museum Curator	1	1	0	Th. S. Delection
2.	Typist	1	1	1	*Th. T. AshokKumar
3.	Attendant	1	1	0	Th. P. Murali
4.	Sub Inspector of Fisheries	1	1	1	**Mr. A. Sankara Avudaiappan, Laboratory Assistant, Dept. of FQ&AM

* As per the Registrar's order, one typist on contractual basis has been engaged for a period of one year from 07.03.2020 to 06.03.2021

** As per the Registrar's order, Mr. A. Sankara Avudaiappan has been engaged on Contract basis against the vacant post of Sub-Inspector of Fisheries held in the Dept. of FBRM for a period of one year from 17.03.2020 to 16.03.2021

Workers on Daily Wage Basis (Coolie)

S. No	Name of the posts	Place of work	Nature of work
1.	Coolie – Mr. Isakkidurai	Fisheries Museum	To look after the maintenance of the museum
2.	Coolie – Mr. Anto	Shore lab Field Research Facility	To look after the live animals

6.4.4. CLASSROOMS AND LABORATORIES:

No. of class rooms available for PG programme: One smart classroom with facilities to use ICT tools

The Department has an UG Laboratory, a PG Laboratory and a wetlab. In addition, there is a Fisheries Biodiversity Museum.

Infrastructure / Equipment Facilities Developed

UG and PG Laboratories:

There are two laboratories (1 UG Lab & 1 PG Lab) for both teaching and research programmes. The UG biology laboratory is provided with ten laboratory tables for conducting practical activities on taxonomy, anatomy and biology. The instruments available for teaching and research purposes include a stereoscopic zoom microscope, trinocular Nikon advanced research microscope with micro-photographic attachment, visualizer cum projector, underwater video-camera, Fry's Modified Respirometer, ELISA Reader, Electrofisher, Spectrophotometer etc.

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educated about the value of aquatic biodiversity and the need for proper conservation and management of aquatic resources by displaying the specimens in see through racks.



School students' visit



College students' visit



Sei whale – Skeletal Specimen



Finfish Specimens



Sperm whale - Skeleton Specimen

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Shore Lab Field Research Facility (SRFF):

This is one of the off-campus facilities of TNJFU, Nagapatinam. which has been established in the Fishing Harbour Campus, Thoothukudi. It was initially established under Dept. of Ocean Development, New Delhi during 1991 – 1994. Recently, this research facility was renovated under university funding to facilitate P.G. students in their research work on growth and reproductive biology of marine fish species.






UG Laboratory




PG Classroom




PG Laboratory




Museum







Laboratory and Equipments






LABORATORIES AND EQUIPMENTS:

Equipment:

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4	Microscope with Image Processing System	1	
5	Rotary Evaporator	1	Used to recover solvent
6	ELISA Reader Bio Tek ELX 800	1	Used for reading hormone quantity and DNA purity
7	Nikon Microscope- model E50i	1	Used to observe tissues and larvae

8	New Brunswick Premium Ultra low temperature vertical freezer	1	Used to store fish and tissue samples
9	Refrigerated centrifuge Eppendorf 5804R	1	Used to conduct biochemical tests
10	Double distillation Unit	1	Used to produce distilled water for preparing various solutions
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12	Hot air oven	1	General laboratory purpose
13	Laminar flow chamber	1	For conducting experiment under aseptic condition and carryout microbiological experiments for PG studies
14	Gel documentation system	1	For studying gel band
15	Electrophoresis unit	2	To perform protein characterization
16	UV vis Spectrophotometer	1	To perform essential water quality parameter and quantification of solution
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D. Students' Research –

Ph D (FRM): Completed

S. No	Name of the Student	Title of the Research
1.	R Saravanan DPF 12007 (FRM) 2015	Studies on sea urchin biology and its resources from the Gulf of Mannar
2.	P Elakkanai DPF 12005 (FRM) 2015	Role of neuroendocrine modulators on gonadal maturation in rainbow shark (*Epalzeorhynchos frenatum*)
3.	N Jayakumar DPF 12006 (FRM) 2016	Effects of selected endocrine disruptors on the reproductive characteristics of the freshwater catfish *Heteropneustes fossillis* (Blotch)
4.	Mogalekar Havagiappa Sharnappa DPF 1305 (FRM) 2017	Fish diversity and productivity of selected reservoirs of southern Tamil Nadu
5.	A Subburaj DPF 14014 (FRM) 2018	Effects of selected endocrine disruptors on the biomarker enzymes DNA and Histology of Mozambique Tilapia (*Oreochromis mossambicus*)
6.	Jyoti Saroj DPF (T) 16031 (FRM)	Studies on fish eggs and larvae in near shore waters of Gulf of Mannar Tamil Nadu

D. Completed Research Projects:

Sl.No	Title of the Project	Year	PI & Co-PIs of the Projects	Amount	Funding Agency
1.	Appraisal of marine fish landings of Tamilnadu.	2018 - 2019	PI – Dr. P. Jawahar Co-PI – Mr. P. Pavinkumar	Rs.8.33 lakh	Handy – Water base India (P) Ltd, Tuticorin.
2.	Establishment of deep sea fishing technology training and management center at Thoothukudi and Thoothoor	2018 – 2019	Co-PI – Dr. P. Jawahar	Rs.382.0 lakh	Dept. of Animal Husbandry, Dairying and Fisheries.
3	Assessment of fishing pattern and fishing pressure in Gulf of Mannar	2017 - 2018	Co-PIs – Dr. P. Jawahar Dr. S. David Kingston	Rs.21.00 lakhs	NABARD (NAFFC)

4	Resource Management and conservation of Kombuthurai through co-management	March 2016 - March 2018	PI: Dr. P. Jawahar	Rs.4.99 lakhs	Tamil Nadu State Fisheries Department under FIMSUL II
5	Establishment of marine finfish hatchery system at Mandapam	31.12.14 to 31.03. 17	PI: Dr. P. Jawahar	Rs.1.85 crores	NADP Scheme
6	Impact of large scale cultivation of seaweeds on coastal environment of India	14.11.2013 to 31.03.2016	Co-PIs: Dr. P. Jawahar Dr. N. Jayakumar	Rs.47.24 lakhs	NCSCM, Chennai
7	Development of Technologies for hatchery production of Marine gastropods and Ornamental fishes at Lakshadweep and Gulf of Mannar Islands- sea ranching and technology transfer to coastal and island communities'.	2008 - 2012	PI: Dr. P. Jawahar	Rs.33.39 lakhs	Ministry of Earth Science, Government of In
8	Generating alternative livelihood options for the coastal community towards biodiversity conservation in	2011 - 2012	PI: Dr. N. Jayakumar	Rs.24.85 lakhs	NADP Scheme
9	Environmental factors influencing spatiotemporal variation of fish and shellfish eggs and larvae of Gulf of Mannar.	2011 - 2012	PI: Dr. P. Jawahar	Rs.7.60 lakhs	Gulf of Mannar Biosphere Trust, Ramanathapuram
10	Effect of kisspeptin on change in level of reproductive hormones and gonadal maturation in an air breathing fish, *Channa striatus*	2010 - 2013	PI – Dr. T. Franchis Co-PI – Dr. N. Jayakumar	Rs.49.32 lakhs	DBT, New Delhi
11	Molluscan diversity of Gulf of Mannar Biosphere Reserve Region and its current exploitation rate in different fishing practices sponsored by Gulf of Mannar Biosphere Reserve Trust, Ramanathapuram	2010 - 2013	PI – Dr. V. K. Venkatara mani Co-PI – Dr. N. Jayakumar	Rs.2.70 lakhs	TANUVAS, Chennai
12	Impact of trawling in Gulf of Mannar Biosphere Trust region - sponsored by Gulf of Mannar Biosphere Reserve Trust,	2010 - 2013	Co-PI: Dr. N. Jayakumar	Rs.2.50 lakhs	TANUVAS, Chennai

E. Ongoing research project: Nil

F. Research Project Proposal Submitted / Sanctioned:

Sl. No.	Title of the Project	Year	PI & Co- PI of the Project	Budget(in Lakhs)	Funding Agency
1.	Study on spawning seasonality of major marine fishery groups along the coast of Tamil Nadu for sustainable fishery management	2021	N. Jayakumar (PI)	Rs. 146.8 Lakh	Govt. of Tamil Nadu
2.	Digital solutions for sea turtle conservation in south east coast of Tamil Nadu	2021	C. Sudhan (PI)	Rs 2 Lakh	TNJFU

6.4.5. CONDUCT OF PRACTICAL AND HANDS-ON-TRAINING:

During the course work in the first two semesters of Ph.D (FRM), the practical classes are conducted in the PG laboratory, SRFF and museum. In addition, students are taken to the field like seashore, fishing harbours, fish markets and various fisheries organizations like CMFRI, MPEDA, State Fisheries Department etc. to enable them to gain field exposure and hands-on experience. Furthermore, Ph.D students carry out their lab-based dissertation work in the PG laboratory and Wet-lab. The students those who collect data and conduct survey in the field as part of their dissertation work are facilitated in collection of field data and conducting survey in the field.

6.4.6. SUPERVISION OF STUDENTS IN PG PROGRAMMES:

A faculty in the cadre of Professor serves as PG Coordinator for coordinating the academic and research activities of all the PG and Ph.D. students of the Institute. At Department level, a Student's Advisory Committee consisting of a Chairman (Major Advisor) and two members is constituted for each PG student separately to guide them from proposing the research work till the final viva-voce examination. For Ph.D students, a Student's Advisory Committee consisting of a Chairman (Major Advisor) and three members is constituted for each Ph.D. student separately to guide them from proposing the research work till the final viva-voce examination. There are provisions for inducting an external advisor in the Advisory Committee in case of students carrying out their research work in other organisations or in other states.

COMPLETED

S. No	Name of the Student	Title of the Research	Name and designation of the Chair / Major Advisor
1.	R Saravanan DPF 12007 (FRM) 2015	Studies on sea urchin biology and its resources from the Gulf of Mannar	Dr. P. Jawahar Controller of Examinations; TNJFU Nagapattinam.
2.	P Elakkanai DPF 12005 (FRM) 2015	Role of neuroendocrine modulators on gonadal maturation in rainbow shark (*Epalzeorhynchos frenatum*)	Dr. T. Francis Professor and Head (Retd); Department of Fisheries Biology and Resource Management; TNJFU-FCRI Thoothukudi.
3.	N Jayakumar DPF 12006 (FRM) 2016	Effects of selected endocrine disruptors on the reproductive characteristics of the freshwater catfish *Heteropneustes fossillis* (Blotch)	Dr. T. Francis Professor and Head (Retd); Department of Fisheries Biology and Resource Management; TNJFU-FCRI Thoothukudi.
4.	Mogalekar Havagiappa Sharnappa DPF 1305 (FRM) 2017	Fish diversity and productivity of selected reservoirs of southern Tamil Nadu	Dr. P. Jawahar Controller of Examinations; TNJFU Nagapattinam.
5.	A Subburaj DPF 14014 (FRM) 2018	Effects of selected endocrine disruptors on the biomarker enzymes DNA and Histology of Mozambique Tilapia (*Oreochromis mossambicus*)	Dr. P. Jawahar Controller of Examinations; TNJFU Nagapattinam.
6.	Jyoti Saroj DPF (T) 16031 (FRM)	Studies on fish eggs and larvae in near shore waters of Gulf of Mannar Tamil Nadu	Dr. P. Jawahar Controller of Examinations; TNJFU Nagapattinam.

6.4.7. FEEDBACK OF STAKEHOLDERS (STUDENTS, PARENTS, INDUSTRIES, EMPLOYERS, FARMERS ETC.):

The students are provided with a feedback form at the end of the degree programme to collect their opinion / remarks on teaching, research, guidance provided, facilities available etc. in the department. Based on the feedback of the students, modifications are made in the department when needed.

6.4.8 STUDENT INTAKE AND ATTRITION IN THE PROGRAMME FOR LAST FIVE YEARS:

Name of the Degree Programme	Actual student admitted in last five years					Attrition (%)				
Ph.D	2016 -17	2017 -18	2018 -19	2019 -20	2020 -21	2016 -17	2017 -18	2018 -19	2019 -20	2020 -21
Fisheries Resource Management	2	0	3	0	2	0	0	0	0	0

6.4.9 ICT APPLICATION IN CURRICULA DELIVERY:

Since ICTs provide greater opportunity for both teachers and students to adjust learning and teaching to individual needs, ICT application has been integrated in our Institute's educational system. Our campus has been wi-fi enabled and hence the students can surf through internet 24x7 for literature survey for their research work; for collection of notes and for preparation of assignments. Further, teachers make powerpoint presentations and show videos while teaching. Likewise students also present seminar using the powerpoints. The students are guided through online platforms when need arises.

Certificate

I, the Dean in-charge, **Dr. N.V. Sujathkumar** hereby certify that the information contained in the Section 6.4.1 to 6.4.9 is furnished as per the records available in the college, and degree awarding university.



Signature of the Dean of the college with Date & Seal

TAMIL NADU Dr. J JAYALALITHAA FISHERIES UNIVERSITY

Self Study Report for Post Graduate Degree Programme (M.F.Sc. in Aquatic Animal Health)

Submitted by

Fisheries College and Research Institute,
Thoothukudi – 628 008
Tamil Nadu

6.4. SELF STUDY REPORT FOR THE POST GRADUATE DEGREE PROGRAMME - M.F.SC IN AQUATIC ANIMAL HEALTH

6.4.1 BRIEF HISTORY OF THE M.F.SC IN AQUATIC ANIMAL HEALTH DEGREE PROGRAMME:

Master of Fisheries Science (M.F.Sc) in Aquatic Animal Health is offered by the Department of Fish Pathology and Health Management at Fisheries College and Research Institute, Thoothukudi. Considering the need for controlling disease incidences and THE resultant economic losses, Fisheries College and Research Institute has started a fish disease management section in the Department of Aquaculture with establishment of a bacteriology laboratory in 1991 with the help of an International Project obtained from the Asian Fisheries Society, Manila. This lab was further renovated under the National Agricultural Technology Project on Shrimp and Fish Health Management in 2000. The section also established Virology and Cell Culture units in 2001 by a Govt. of Tamil Nadu Part II scheme. The Virology and Cell culture units were shifted to a new Fish Virology Laboratory in 2009. In 2013, the section was raised to the Department of Fish Pathology and Health Management by the Tamil Nadu Fisheries University. Faculty serving in the department have undergone international trainings in UK and US apart from visiting seven other countries on official assignments. From the academic year 2014-2015, M.F.Sc in Aquatic Animal Health programme is being offered by the Department with an intake capacity of six students per annum. Then on, the programme is offered following ICAR guidelines for the PG programme. The list of courses dealt in the degree programme is given below:

S.No	Course No	Title of the Course	Credit Hours
1	AAH 501	Viral and bacterial Diseases of Finfish and Shellfish	3 (2+1)
2	AAH 502	Parasitic Disease of Finfish and Shellfish	3 (2+1)
3	AAH 503	Health Management in Aquaculture	3 (2+1)
4	AAH 504	Systemic Fish Pathology	3 (2+1)
5	AAH 505	Fish Immunology	3 (2+1)
6	AAH 506	Microbiological Techniques	2 (1+1)
7	AAH 507	Fish Virology and Cell Culture	3 (2+1)
8	AAH 508	Clinical Pathology	2 (1+1)
9	AAH 509	Non Infectious and Fungal Diseases	2 (1+1)
10	AAH 510	Aquatic Environment and Fish Health	2 (1+1)
11	AAH 511	Diagnostic Techniques	2 (1+1)
12	AQC 504	Aquatic Animal Health Management	3 (2+1)

The faculty strength of Department of Fish Pathology and Health Management is shown in the below table:

Sl. No	Name of the Post	Sanctioned strength	In position	Vacancy	Recommendations of V Deans' Committee
1.	Professor	1	1	-	1
2.	Associate Professor	1	-	1	2
3.	Assistant Professor	2	2	-	3
	Total	**4**	**3**	**1**	

6.4.3. TECHNICAL AND SUPPORTING STAFF:

Sl.No	Name of the Post	Sanctioned strength	In position
1.	Assistant (Non-Sec.)	1	1
2	Technician	1	1
3.	Junior Assistant (Non-Sec.)	1	1
4.	Watchman	1	1
5.	Lab Attendant	1	1
6.	Office Assistant	1	1
	Total	**6**	**6**

6.4.4. CLASSROOMS AND LABORATORIES:

FACILITIES:

- Bacteriology laboratory
- Virology laboratory
- Cell Culture laboratory
- Histopathology laboratory
- Challenge room
- Molecular Biology lab



Virology Laboratory





Cell culture Laboratory





Histopathology Laboratory





Challenge Room




Molecular Biology Lab




Training Hall:




- Refrigerated Centrifuges
- Ultra Centrifuge
- Upright and Inverted Microscopes with Fluorescence and Photomicrography
- Cooling Incubators
- Flash Evaporator
- Thermal Cyclers
- Real Time PCR
- Gel doc System
- UV Spectrophotometer
- Luminometer
- ELISA Reader
- Osmometer
- Biosafety Cabinets
- Cryocans
- DNA Concentrator
- Ultra Deep Freezers
- Freeze Dryer
- Temperature Controlled Water Baths
- Water Purification System
- Microtome
- Tissue Embedder
- Automatic Tissue Processor
- Autoclaves, Ovens, Incubators, Water Baths, Printers, Computers, Refrigerators, UPS, PCR Work Stations, Gel Electrophoresis Systems, Western Blot Apparatus, Digital Balances, Digital Camera, etc.,

Current focus of research and future thrust areas

a. Surveillance of emerging and existing fish and shellfish diseases of south Tamil Nadu

b. Development of improved diagnostic techniques for bacterial and viral pathogens to aid in emerging and existing diseases

c. Development of vaccines/therapeutics for bacterial and viral diseases of fish

d. Development and pharmacological investigations of herbal mixtures and other formulations for fish and shellfish disease control

e. Studies on host responses to prophylactic and therapeutic formulations

Sl. No.	Title of the Scheme	Funding agency	Budget (₹in lakh)	Principal Investigator
1.	National Surveillance programme for Aquatic Animal Diseases (Sc.No.30101)	NFDB – ICAR & PMMSY scheme	Rs.95.312	Dr.B.Chrisolite

Self-financing schemes

Sl. No.	Title of the Scheme	Centers	Services	Annual turnover (₹ in lakh)
1	**TNJFU Referral Laboratory for Aquatic AnimalHealth**	Department of Fish Pathology and health management	Testing of fish and shell fish for disease diagnosis	**From November 2020**

6.4.5 Conduct of Practical and Hands-on-Training

The department has a full-fledged facility for the conduct of practical classes on aspects related to aquatic animal health viz., diagnostic techniques, sample collection and processing for disease diagnosis; conduct of challenge experiments in fish and shrimps

6.4.6. SUPERVISION OF STUDENTS IN PG PROGRAMMES:

During the course work, PG students' academic progress is being monitored by PG batch coordinator in the rank of Professor & Head. In the second year (research work), progress of student's research is being monitored by the advisory committee comprising of Chairman and two advisors. Thedetails of PG students since the inception of the programme in the Department is given below:

Completed

S.No	Batch	Reg. No of the Student	Name of the Student	Research Topic	Name and designation of the Chair/ Major Advisor
1	2014-2015	MFT 14045 (AAH)	D.KAVIARASU	Immune gene expression in koi following koi ranavirus (KIRV) infection	Dr.K.Riji John Department of Fish Pathology and Health Management
2	2014-2015	MFT. 14047 (AAH)	M.PETCHIMUTHU	Prevalence of Parasites in cultured fin fish of South Tamil Nadu.	Dr.M.Rosalind George, Department of Fish Pathology and Health Management

3	2015-2016	MFT 15070 (AAH)	S.V. ANU SHALINI	"Identification of virulence factors associated with bacterial strains of shrimp farming systems through metagenomics."	Dr.K.Riji John Department of Fish Pathology and Health Management
4	2015-2016	MFT 15072 (AAH)	M.GIRIDHARAN	Development of a molecular diagnostic assay for specific detection of *Enterocytozoonhepatopenaei*infecting penaeid shrimp	Dr.A.Uma Professor
5	2016-2017	MFT16085(AAH)	S.J. ABISHA JULIET MARY,	"Characterization of rhabdovirus like agent isolated from fish"	Dr.K.Riji John Department of Fish Pathology and Health Management
6	2016-2017	MFT 16087 (AAH)	PRATHISHA. R	Assessment of occurrence of *Enterocytozoonhepatopenaei* in South Tamil Nadu	Dr.M.Rosalind George Department of Fish Pathology and Health Management
7	2016-2017	MFT 16086 (AAH)	D. EVANGELIN PARIPOORANA,	"Immunization of marine finfish with pathogenic *Photobacteriumdamselae*subsp.*damselae*"	Dr.M.Rosalind George, Department of Fish Pathology and Health Management
8	2017-2018	I-17-TN-03-002-M-F-048 (AAH)	HARAPRIYA BEHERA	Isolation and characterization of gut microbes for the development of probiotics and its evaluation in tilapia (GIFT)	Dr.K.Riji John Department of Fish Pathology and Health Management
9	2017-2018	U-17-TN-03-002-MF-035 (AAH)	KALARIA KISHAN K.	Development of therapeutic intervention methods for control of infectious diseases of fish	Dr.K.Riji John Department of Fish Pathology and Health Management
10	2017-	ID.NO:-U-17-	KORUPROLU	Isolation and	Dr.M.Rosalind

	2018	TN-03-002-M-F-036, (AAH)	KEERTHI	characterization of *Flavobacterium* species and *Edwardsiellatarda* from infected fishes and environmental samples	George, Department of Fish Pathology and Health Management
11	2018-2019	(U-18-TN-03-002-M-F-012)	LEKSHMI HARIDAS	"Immune gene expression studies in *Oreochromisniloticus* (Linnaeus,1758) experimentally infected with Tilapia Lake Virus (TiLV)"	Dr.M.Rosalind George, Department of Fish Pathology and Health Management

Ongoing

S.No	Batch	Reg. No of the Student	Name of the Student	Research Topic	Name and designation of the Chair/ Major Advisor
1.	2020-21	U-16-TN-03-002-B-F-051	Gowtham. S	Isolation and Characterization of virulence genes and antimicrobial resistance genes in motile *Aeromonas* sp from fresh water fishes of Tamil Nadu	**Dr. B. Chrisolite** Assistant Professor, Department of Fish Pathology and Health management
2.	2020-21	I-20-TN-03-002-M-F-011	MerinTreesa Varghese	Screening for virulence genes and antimicrobial resistance genes in *Photobacterium damselae*subsp *damselae*from marine fishes of Tamil Nadu	**Dr. B. Chrisolite** Assistant Professor, Department of Fish Pathology and Health management

3.	2020-21	U-20-TN-03-002-M-F-004	Rakesh. P	Antiviral activity of natural compounds against Tilapia lake virus	**Dr. B. Chrisolite** Assistant Professor, Department of Fish Pathology and Health management
4.	2020-21	U-16-TN-03-002-B-F-082	Sri Balaji. R.S	Evaluation of *Enterocytozoon hepatopenaei* (EHP) in biotic and abiotic factors of shrimp rearing system in Tamilnadu	**Dr. M. Rosalind George,** Department of Fish Pathology and Health Management,

6.4.7. FEEDBACK OF STAKEHOLDERS (STUDENTS, PARENTS, INDUSTRIES, EMPLOYERS, FARMERS ETC.):

The academic sessions of the college are being assessed with feedback from the students regarding teaching through questionnaires and student counselling by PG coordinator and advisory committee.

6.4.8. STUDENT INTAKE AND ATTRITION IN THE PROGRAMME FOR LAST FIVE YEARS:

Name of the Degree Programme	Actual student admitted in last five years					Attrition (%)				
	2016-17	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**
M.F.Sc (Aquatic Animal Health)	**4**	**4**	**4**	**0**	**4**	**25**	**25**	**75**	**0**	**0**

6.4.9. ICT APPLICATION IN CURRICULA DELIVERY:

Teaching through ICT tools is being followed for effective teaching by making use of the wi-fi campus facility and classroom environment. PG/Ph.D. students' advisory committee sometimes comprises of faculty from other constituent units (working outside the student's institute) of the University. Therefore, there is monthly video conferencing research credits of PG/Ph.D. programmes through online video conference mode.

Certificate

I, the Dean in-charge, **Dr. N.V.Sujathkumar** hereby certify that the information contained in the Section 6.4.1 to 6.4.9 are furnished as per the records available in the college, and degree awarding university.



Signature of the Dean of the College with Date & Seal

TAMIL NADU Dr. J JAYALALITHAA FISHERIES UNIVERSITY

Self Study Report for Post Graduate Degree Programme (Ph.D. in Aquatic Animal Health)

Submitted by

Fisheries College and Research Institute,
Thoothukudi – 628 008
Tamil Nadu

6.4. SELF STUDY REPORT FOR THE DOCTOR OF PHILOSOPHY DEGREE PROGRAMME - Ph.D IN AQUATIC ANIMAL HEALTH

6.4.1. BRIEF HISTORY OF THE Ph.D IN AQUATIC ANIMAL HEALTH DEGREE PROGRAMME:

Doctor of Philosophy (P.h.D) in Aquatic Animal Health is offered by the Department of Fish Pathology and Health Management at Fisheries College and Research Institute, Thoothukudi. Considering the need for controlling disease incidences and resultant economic losses, Fisheries College and Research Institute has started a fish disease management section in the Department of Aquaculture with establishment of a bacteriology laboratory in 1991 with the help of an International Project obtained from the Asian Fisheries Society, Manila. This lab was further renovated under the National Agricultural Technology Project on Shrimp and Fish Health Management in 2000. The section also established Virology and Cell Culture units in 2001 by a Govt. of Tamil Nadu Part II Scheme. The Virology and Cell culture units were shifted to a new Fish Virology Laboratory in 2009. In 2013, the section was raised to the Department of Fish Pathology and Health Management by the Tamil Nadu Fisheries University. Faculty serving in the department have undergone international trainings in UK and US apart from visiting seven other countries on official assignments. From the academic year 2016-2017, P.h.D in Aquatic Animal Health programme is being offered by the Department with an intake capacity of three students per annum. Then on, the programme is offered following ICAR guidelines for the PG programme. The list of courses dealt in the degree programme is given below:

S.No	Course No	Title of the Course	Credit Hours
1	AAH 601	Fish and Shellfish Virology	3 (2+1)
2	AAH 602	Advances in Parasitology	3 (2+1)
3	AAH 603	Molecular Mechanisms in Disease Process	3 (2+1)
4	AAH 604	Crustacean Pathology	2 (1+1)
5	AAH 605	Fish Pharmacology	3 (2+1)
6	AAH 606	Biotechnological Tools in Disease Diagnosis	2 (1+1)
7	AAH 607	Public Health Microbiology and Epidemiology	3 (2+1)
8	AAH 608	Molecular Techniques in Microbiology	2 (1+1)
9	AAH 609	Fish Mycology and Virology	2 (1+1)

6.4.2. FACULTY STRENGTH:

The faculty strength of Department of Fish Pathology and Health Management is shown in the below table:

Sl. No	Name of the Post	Sanctioned strength	In position	Vacancy	Recommendations of V Deans' Committee
1.	Professor	1	1	-	
2.	Associate Professor	1	-	1	
3.	Assistant Professor	2	2	-	
	Total	**4**	**3**	**1**	

6.4.3. TECHNICAL AND SUPPORTING STAFF:

Sl.No	Name of the Post	Sanctioned strength	In position
1.	Assistant (Non-Sec.)	1	1
2	Technician	1	1
3.	Junior Assistant (Non-Sec.)	1	1
4.	Watchman	1	1
5.	Lab Attendant	1	1
6.	Office Assistant	1	1
	Total	**6**	**6**

6.4.4. CLASSROOMS AND LABORATORIES:

No. of class rooms available for PG programme: One smart classroom with facilities to use ICT tools.

FACILITIES:

- Bacteriology laboratory
- Virology laboratory
- Cell Culture laboratory
- Histopathology laboratory
- Challenge room
- Molecular Biology lab




Bacteriology Laboratory



Virology Laboratory




Cell culture Laboratory




Histopathology Laboratory




Challenge Room




Molecular Biology Lab




Training Hall

Current focus of research and future thrust areas

a. Surveillance of emerging and existing fish and shellfish diseases of south Tamil Nadu

b. Development of improved diagnostic techniques for bacterial and viral pathogens to aid in emerging and existing diseases

c. Development of vaccines/therapeutics for bacterial and viral diseases of fish

d. Development and pharmacological investigations of herbal mixtures and other formulations for fish and shellfish disease control

e. Studies on host responses to prophylactic and therapeutic formulations

ONGOING PROJECT DETAILS:

Sl. No.	Title of the Scheme	Funding agency	Budget (₹in lakh)	Principal Investigator
1.	National Surveillance programme for Aquatic Animal Diseases (Sc.No.30101)	NFDB – ICAR & PMMSY scheme	Rs.95.312	Dr.B.Chrisolite

Self-financing schemes

Sl. No.	Title of the Scheme	Centers	Services	Annual turnover (₹ in lakh)
1	**TNJFU Referral Laboratory for Aquatic AnimalHealth**	Department of Fish Pathology and health management	Testing of fish and shell fish for disease diagnosis	**Started November 2020**

Equipment:

- Refrigerated Centrifuges
- Ultra Centrifuge
- Upright and Inverted Microscopes with Fluorescence and Photomicrography
- Cooling Incubators
- Flash Evaporator
- Thermal Cyclers
- Real Time PCR
- Gel doc System
- UV Spectrophotometer
- Luminometer
- ELISA Reader
- Osmometer
- Biosafety Cabinets
- Cryocans
- DNA Concentrator
- Ultra Deep Freezers
- Freeze Dryer
- Temperature Controlled Water Baths

- Water Purification System
- Microtome
- Tissue Embedder
- Automatic Tissue Processor
- Autoclaves, Ovens, Incubators, Water Baths, Printers, Computers, Refrigerators, UPS, PCR Work Stations, Gel Electrophoresis Systems, Western Blot Apparatus, Digital Balances, Digital Camera, etc.,

Current focus of research and future thrust areas

f. Surveillance of emerging and existing fish and shellfish diseases of south Tamil Nadu

g. Development of improved diagnostic techniques for bacterial and viral pathogens to aid in emerging and existing diseases

h. Development of vaccines/therapeutics for bacterial and viral diseases of fish

i. Development and pharmacological investigations of herbal mixtures and other formulations for fish and shellfish disease control

j. Studies on host responses to prophylactic and therapeutic formulations

ONGOING PROJECT DETAILS:

Sl. No.	Title of the Scheme	Funding agency	Budget (₹in lakh)	Principal Investigator
1.	National Surveillance programme for Aquatic Animal Diseases (Sc.No.30101)	NFDB – ICAR & PMMSY scheme	Rs.95.312	Dr.B.Chrisolite

Self-financing schemes

Sl. No.	Title of the Scheme	Centers	Services	Annual turnover (₹ in lakh)
1	**TNJFU Referral Laboratory for Aquatic AnimalHealth**	Department of Fish Pathology and health management	Testing of fish and shell fish for disease diagnosis	**Started November 2020**

6.4.5 Conduct of Practical and Hands-on-Training

The department has a full-fledged facility for the conduct of practical classes on aspects related to aquatic animal health viz., diagnostic techniques, sample collection and processing for disease diagnosis; conduct of challenge experiments in fish and shrimps.

6.4.6. SUPERVISION OF STUDENTS IN PG PROGRAMMES:

During the course work, PG students' academic progress is being monitored by PG batch coordinator in the rank of Professor & Head. In the second year (Research), progress of student's research is being monitored by the advisory committee comprising of Chairman and two advisors. The details of PG students since the inception of the programme in the Department is given below:

Completed

S.No	Batch	Reg. No of the Student	Name of the Student	Research Topic	Name and designation of the Chair/ Major Advisor
1	2016-2017	MFT 14045 (AAH)	D.KAVIARASU	Infectivity assessment of ranavirus in cultivable fishes	**Dr.K.Riji John** Department of Fish Pathology and Health Management
2	2016-2017	MFT. 14047 (AAH)	M.PETCHIMUTHU	Molecular characterization and pathogenicity investigation of *Photobacteriumd amselae* in fish	**Dr.M.Rosalind George,** Department of Fish Pathology and Health Management,

Ongoing

S.No	Batch	Reg. No of the Student	Name of the Student	Research Topic	Name and designation of the Chair/ Major Advisor
1.	2020-21	U-20-TN-03-002-D-F-002	Prathisha. R	Effectiveness of green synthesized nanoparticles for the treatment of bacterial disease *Photobacterium damselae*subsp. *damselae*	**Dr. M. Rosalind George,** Department of Fish Pathology and Health Management,
2.	2020-21	U-18-TN-03-003-M-F-005	Subash. P	Etiological analysis of white feces syndrome in *Penaeus vannamei*and its mitigation measures using phytogenic compounds.	**Dr. B. Chrisolite** Assistant Professor, Department of Fish Pathology and Health management

6.4.7. FEEDBACK OF STAKEHOLDERS (STUDENTS, PARENTS, INDUSTRIES, EMPLOYERS, FARMERS ETC.):

The academic sessions of the college are being assessed with feedback from the students regarding teaching through questionnaires and student counseling by PG coordinator and advisory committee.

6.4.8.STUDENT INTAKE AND ATTRITION IN THE PROGRAMME FOR LAST FIVE YEARS:

Name of the Degree Programme	Actual student admitted in last five years					Attrition (%)				
	2016-17	2017-18	2018-19	2019-20	2020-21	2016-17	2017-18	2018-19	2019-20	2020-21
P.h.D (Aquatic Animal Health)	2	0	0	0	2	0	0	0	0	0

6.4.9. ICT APPLICATION IN CURRICULA DELIVERY:

Teaching through ICT tools is being followed for effective teaching by making useof the wi-fi campus facility and classroom environment. PG/Ph.D. students' advisory committee sometimes comprises of faculty from other constituent units (working outside the student's institute) of the University. Therefore, there is monthly video conferencing research credits of PG/Ph.D. programmes through online video conference mode.

Certificate

I, the Dean in-charge, **Dr. N.V.Sujathkumar** hereby certify that the information contained in the Section 6.4.1to 6.4.9 are furnished as per the records available in the college, and degree awarding university.



Signature of the Dean of the College with Date & Seal

TAMIL NADU Dr. J JAYALALITHAA FISHERIES UNIVERSITY

Self Study Report for Post Graduate Degree Programme (M.F.Sc. in Aquatic Environment Management)

Submitted by

Fisheries College and Research Institute,
Thoothukudi – 628 008
Tamil Nadu

6.4. SELF STUDY REPORT FOR THEPOST GRADUATE DEGREE PROGRAMME - M.F.SC IN AQUATIC ENVIRONMENT MANAGEMENT

6.4.1. BRIEF HISTORY OF THE M.F.SC IN AQUATIC ENVIRONMENT MANAGEMENT DEGREE PROGRAMME:

Department of Fisheries Environment was established at Fisheries College and Research Institute, Thoothukudi by the Tamil Nadu Agricultural University (TNAU) in 1977. The department was established with the aim of offering professional education on aquatic environment, conducting pollution monitoring studies and extending fisheries knowledge to the farming and fishing communities. The specialized PG programme on M.F.Sc. in Fisheries Environment was started in the year 1993, which was then renamed as M.F.Sc. in Aquatic Environment Management under the ICAR common syllabus system. Every year, 3 students are being admitted in M.F.Sc. programme for pursuing their M.F.Sc. degree. The Ph.D. programme in Aquatic Environment Management was stated in the year 2014 with an intake capacity of 2 per year. This department is offering 8 UG courses, 12 PG courses and 10 Ph.D. courses. The department was renamed as Department of Aquatic Environment Management in January 2017 as per the ICAR nomenclature.

The research work pertaining to this department are pollution monitoring of coastal water bodies, including mangroves, coastal productivity, impact of seaweed culture on the coastal environment, bioremediation of pollutants, etc., So far, this department had produced 52 PG students. The department had also conducted various training programme on water quality management issues in aquaculture systems, utilization of wastes for the production of live food organisms, bioconversion of fish solid waste for the benefit of seafood processors, farmers, researchers and self-help groups. The department provides advisory services to fish, shrimp, ornamental farmers and entrepreneurs in the field of water quality analysis and management.

The department periodically receives samples from farmers of various districts of the state to understand the prospects of establishing a farm or learn problems in water quality and sudden mass mortality of cultured fishes/shrimps. The department provides advisory services to the fish, shrimp and ornamental farmers and entrepreneurs, related to soil and water management. The State Fisheries Department also approaches this department with local problems related to mass fish kills in public water bodies.

MFSc Courses

MAJOR COURSES			
S.No	**Course code**	**Course title**	**Credit hours**
1	AEM 501	Aquatic Environment and Biodiversity	3 (2 + 1)
2	AEM 502	Ecology and Management of Limnetic Environment	3 (2 + 1)
3	AEM 503	Planktonology	3 (2 + 1)
4	AEM 504	Aquatic Microbial Ecology	3 (2 + 1)
5	AEM 505	Fisheries Oceanography	2 (1 + 1)
6	AEM 506	Integrated Coastal Zone Management	3 (2 + 1)
7	AEM 507	Aquatic Pollution and Wastewater Management	3 (2 + 1)
MINOR COURSES			
1	AEM 508	Analytical Techniques in Environmental Sciences	2 (1 + 1)
2	AEM 509	Chemical Interactions in the Aquatic Environment	3 (2 + 1)
3	AEM 510	Environmental Toxicology	2 (1 + 1)
4	AEM 511	Environmental Biotechnology	2 (1 + 1)

MFSc -2015-16

S.No	Department	Name of the faculty	Number of students guided
1	Aquatic Environment Management	Dr. P. Padmavathy	1
		Dr. A. Srinivasan	1
		Dr. S. Aanand	1

MFSc -2016-17

S.No	Department	Name of the faculty	Number of students guided
1	Aquatic Environment Management	Dr. A. Srinivasan	1

MFSc 2017-18

S.No	Department	Name of the faculty	Number of students guided
1	Aquatic Environment Management	Dr. P. Padhmavathy	2
		Dr. V. Rani	1

MFSc 2018-19

S.No	Department	Name of the faculty	Number of students guided
1	Aquatic Environment Management	Dr. P. Padhmavathy	3
		Dr. V. Rani	1

MFSc 2019-20

S.No	Department	Name of the faculty	Number of students guided
2	Aquatic Environment Management	Dr. P. Padmavathy	1
		Dr. V. Rani	1

MFSc 2020-21

S.No	Department	Name of the faculty	Number of students guided
1	Aquatic Environment Management	Dr. V. Rani	1
		Mrs. D. Manimekalai	1

MFSc -2015-16

S.No	Department	Name of the faculty	Number of students guided
1	Aquatic Environment Management	Dr. P. Padmavathy	1
		Dr. A. Srinivasan	1
		Dr. S. Aanand	1

MFSc -2016-17

S.No	Department	Name of the faculty	Number of students guided
1	Aquatic Environment Management	Dr. A. Srinivasan	1

MFSc 2017-18

S.No	Department	Name of the faculty	Number of students guided
1	Aquatic Environment Management	Dr. P. Padhmavathy	2
		Dr. V. Rani	1

MFSc 2018-19

S.No	Department	Name of the faculty	Number of students guided
1	Aquatic Environment Management	Dr. P. Padhmavathy	3
		Dr. V. Rani	1

MFSc 2019-20

S.No	Department	Name of the faculty	Number of students guided
2	Aquatic Environment Management	Dr. P. Padmavathy	1
		Dr. V. Rani	1

MFSc 2020-21

S.No	Department	Name of the faculty	Number of students guided
1	Aquatic Environment Management	Dr. V. Rani	1
		Mrs. D. Manimekalai	1

6.4.2. FACULTY STRENGTH:

The faculty strength of Department of Aquatic Environment Management is shown in the below table:

Sl.No.	Name of the Post	Sanctioned strength	Staff in position	No. of Vacancy	Recommendations of V Deans' Committee
1.	Professor	-	-	0	1
2.	Associate Professor	1	1	0	1
3.	Assistant Professor	3	3	0	3
Total		**4**	**4**	**0**	**5**

6.4.3. TECHNICAL AND SUPPORTING STAFF:

The details of technical and supporting staff in the department are as follows:

Sl.No.	Name of the Post	Sanctioned strength	Staff in position	No. of Vacancy
1.	Junior Assistant (Non-Sec)	1	--	1
2.	Attender	2	2	--

6.4.4. CLASSROOMS AND LABORATORIES:

- No. of class rooms available for PG programme:
  - PG Class rooms
  - Aquatic Microbiology Lab
  - Soil and Water Chemistry Lab
  - Central Instrumentation Lab
  - Phycology Lab

FACILITIES:

PG classroom has the area of 320 square feet area. This class room consists of LED projector, computer and other infrastructures. This department lab is equipped with pH meter, Spectrophotometer, electronic weighing balance, Hot air oven, hot plate, Fume Chamber, BOD incubator, Flame Photometer, Muffle furnace, Bomb Calorimeter etc.

The following equipment are avialble in the Central Instrumentation Laboratory:

- Cooling centrifuge
- Thermal cycler
- Horizontal and Vertical Gel electrophoresis unit
- Double Beam UV spectrophotometer
- Fermenter
- Inverted Microscope
- High precision weighing balance
- pH meter
- Gas Chromatography
- HPLC
- Rotary Evaporator

This facility provides easy access to all staff and students to carry out their research work

Thrust Areas

Pollution monitoring in Gulf of Mannar coastal region

Monitoring of pesticide residues in Thamirabharani river belts

Utilization of fish waste and drifted seaweeds as fertilizer for Agriculture

Water quality management aspects in *Penaeus vannamei* culture systems and

Toxicity studies on fishes in the inland water bodies

Impact of climate change in fisheries

Ongoing Project Details:

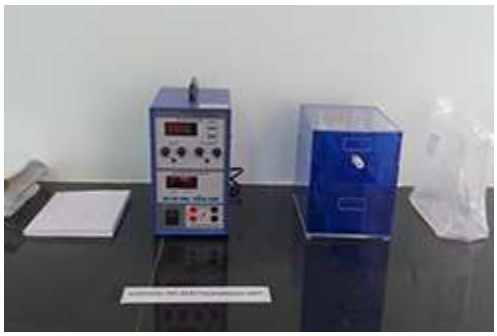
Sl. No.	Title of the Project	Year	PI & Co-PI of the Project	Funds (in Rs.)	Funding Agency
1.	Production of Eicosapentaenoic acid (EPA) from marine diatom *Phaeodactylum tricornutum* isolated from the coastal waters of Gulf of mannar	2019-22	Dr.V.Rani	Rs.41,85, 661/-	DST – SERB, Govt. of India, New Delhi
2.	Impact of Anthropogenic activities and seasonal variation in plankton biomass in Gulf of Mannar Biosphere Reserve (Sc. No. 14-103-02)	2014-17	PI Dr.A.Srinivasan Co-PI Dr.P.Padmavathy Dr.S.Aanand	10.50 Lakhs	GOMBRT, Ramanathapuram
3.	Impact of Large Scale Cultivation of Seaweed Culture in Coastal Environment of India (S.C.No. 20102)	2014-16	PI Dr.A.Srinivasan Co-PI Dr.S.A.Shanmugam Dr.P.Jawahar Th.N.Jeyakumar Dr.P.Padmavathy Dr.S.Aanand	27.12 Lakhs	National Centre for Sustainable Coastal Management (NCSCM), MoEF, Chennai

Laboratories and other facilities available in the Department











6.4.5 Conduct of Practical and Hands-on-Training

The department has a full-fledged facility for the conduct of practical classes on aspects related to aquatic environment, water quality, soil analysis, conduct of challenge experiments in fish and shrimps.

6.4.6. SUPERVISION OF STUDENTS IN PG PROGRAMMES:

During the course work, PG students' academic progress is being monitored by PG batch coordinator in the rank of Professor & Head. In the second year (Research), progress of student's research is being monitored by the advisory committee comprising of Chairman and two advisors. The details of PG students since the inception of the programme in the Department is given below:

MFSC

S.No	Batch	Reg. No of the Student	Name of the Student	Research Topic	Name and designation of the Chair/ Major Advisor
1.	2015-16		Sribidhya		
2			Deepika		
3			Rajeshwari	Isolation and characterization of microbes from fish compost piles to enhance composting process	**Dr.P.Padmavathy**
4.	2016-17		C. Jayapavithran	Distribution and seasonal variation of heavy metals in water, plankton and fish in Coastal waters of Thoothukudi, South East coast of India.	Dr. A. Srinivasan
5.	2017-18		K.Keerthika	Occurrence of microplastics in coastal waters of Thoothukudi	Dr.P.Padmavathy
6.			K.Kathiresan	Role of seaweed extract *(Sargassum sp)* along with fermented trash fish based liquid fertilizer in enhancing plankton productivity	Dr.V.Rani
7.			Mudeet saxena	Bioaccumulation of selected heavy metals in fishes of Thoothukudi coastal waters	Dr.P.Padmavathy
8.	2018-19		A.Aswini	Agrowaste based biochar in the bioremediation of shrimp farm effluent'	A.Aswini
9.			S.Subhashree Devasena,	Assessment of biosorbent developed from fish scales in the treatment of wastewaters'	S.Subhashree Devasena,
10.			Picko		
11.	2019-20		Manashree Deka	Histological and enzymatic effect of cypermethrin and monocrotophos in common carp, *Cyprinus carpio*	Dr.P.Padmavathy

12.			N. Manimozhi	Spatio-temporal variations in the occurrence of microplastics in saltpans and estuaries of coastal region of Gulf of Mannar	Dr. V. Rani
13.	2020-21		M.J.Thamarai Selvi	Evaluating selected marine microalgae as a source of carotenoid pigment (Lutein) from coastal waters of Thoothukudi	Dr.V.Rani
14.	2020 -21		M.Ponmani	Evaluation of hydrocarbon degrading efficiency of microbes isolated from boat building yard and fishing harbour in Thoothukudi	D.Manimekalai

6.4.7. FEEDBACK OF STAKEHOLDERS (STUDENTS, PARENTS, INDUSTRIES, EMPLOYERS, FARMERS ETC.):

The academic sessions of the college are being assessed with feedback from the students regarding teaching through questionnaires and student counselling by PG coordinator and advisory committee.

6.4.8. STUDENT INTAKE AND ATTRITION IN THE PROGRAMME FOR LAST FIVE YEARS:

Name of the Degree Programme	Actual student admitted in last five years					Attrition (%)				
	2016 -17	2017-18	2018-19	2019 -20	2020-21	2016 -17	2017 -18	2018-19	2019 -20	2020 -21
M.F.SC.	2	3	3	2	2	0	0	0	0	0

6.4.9. ICT APPLICATION IN CURRICULA DELIVERY:

Teaching through ICT tools is being followed for effective teaching by making useof the wi-fi campus facility and classroom environment. PG students' advisory committee sometimes comprises of faculty from other constituent units (working outside the student's institute) of the University. Therefore, there is monthly video conferencing research credits of PG programmes through online video conference mode.

Certificate

I, the Dean in-charge, **Dr. N.V.Sujathkumar** hereby certify that the information contained in the Section 6.4.1to 6.4.9 are furnished as per the records available in the college, and degree awarding university.



Signature of the Dean of the College with Date & Seal

TAMIL NADU Dr. J JAYALALITHAA FISHERIES UNIVERSITY

Self Study Report for Doctoral Degree Programme (Ph.D. in Aquatic Environment Management)

Submitted by

Fisheries College and Research Institute,
Thoothukudi – 628 008
Tamil Nadu

6.4. SELF STUDY REPORT FOR THEPOST GRADUATE DEGREE PROGRAMME – Ph.D. AQUATIC ENVIRONMENT MANAGEMENT

6.4.1. BRIEF HISTORY OF THE Ph.D. IN AQUATIC ENVIRONMENT MANAGEMENT DEGREE PROGRAMME:

The Department of Fisheries Environment was established at Fisheries College and Research Institute, Thoothukudi by the Tamil Nadu Agricultural University (TNAU) in 1977. The department was established with the aim of offering professional education on aquatic environment, conducting pollution monitoring studies and extending fisheries knowledge to the farming and fishing communities. The specialized PG programme on M.F.Sc. in Fisheries Environment was started in the year 1993, which was then renamed as M.F.Sc. in Aquatic Environment Management under the ICAR common syllabus system. Every year, 3 students are being admitted in M.F.Sc. programme for pursuing their M.F.Sc. degree. The Ph.D. programme in Aquatic Environment Management was stated in the year 2014 with an intake capacity of 2 per year. This department is offering 8 UG courses, 12 PG courses and 10 Ph.D. courses. The department was renamed as Department of Aquatic Environment Management in January 2017 as per the ICAR nomenclature.

The research work pertaining to this department are pollution monitoring of coastal water bodies, including mangroves, coastal productivity, impact of seaweed culture on the coastal environment, bioremediation of pollutants, etc., So far, this department had produced 52 PG students. The department had also conducted various training programme on water quality management issues in aquaculture systems, utilization of wastes for the production of live food organisms, bioconversion of fish solid waste for the benefit of seafood processors, farmers, researchers and self-help groups. The department provides advisory services to fish, shrimp, ornamental farmers and entrepreneurs in the field of water quality analysis and management.

The department periodically receives samples from farmers of various districts of the state to understand the prospects of establishing a farm or learn problems in water quality and times due to sudden mass mortality of cultured fishes/shrimps. The department provides advisory services to the fish, shrimp and ornamental farmers and entrepreneurs, related to soil and water management. The State Fisheries Department also approaches this department with local problems related to mass fish kills in public water bodies.

Ph.D. courses

Sl. No.	Course code	Course title	Credit hours
1	AEM 601	Advances In Aquatic Environmental Studies	3 (2 + 1)
2	AEM 602	Biotechnology For Cleaner Environment	3 (2 + 1)
3	AEM 603	Benthic Ecology	2 (1 + 1)
4	AEM 604	Estuarine And Coastal Dynamics	3 (2 + 1)
5	AEM 605	Organic Production And Plant Pigments	3 (2 + 1)
6	AEM 606	Environment Impact Assessment	2 (1 + 1)
7	AEM 607	Management And Utilization Of Wastewater	3 (2 + 1)
8	AEM 608	Restoration Ecology	2 (1 + 1)
9	AEM 609	Dispersal And Fate Of Pollutants In The Ocean	2 (1 + 1)

6.4.2. FACULTY STRENGTH:

The faculty strength of Department of Aquatic Environment Management is shown in the below table:

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6.4.4. CLASSROOMS AND LABORATORIES:

- No. of class rooms available for PG programme:
  - PG Class rooms
  - Aquatic Microbiology Lab
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  - Phycology Lab

FACILITIES:

PG classroom has the area of 320 square feet area. This class room consists of LED projector, computer and other infrastructures. This department lab is equipped with pH meter, Spectrophotometer, electronic weighing balance, Hot air oven, hot plate, Fume Chamber, BOD incubator, Flame Photometer, Muffle furnace, Bomb Calorimeter etc.

The following equipment are available in the Central Instrumentation Laboratory

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- Gas Chromatography
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- Rotary Evaporator

This facility provides easy access to all staff and students to carry out their research work

Thrust Areas

Pollution monitoring in Gulf of Mannar coastal region

Monitoring of pesticide residues in Thamirabharani river belts

Utilization of fish waste and drifted seaweeds as fertilizer for Agriculture

Water quality management aspects in *Penaeus vannamei* culture systems and

Toxicity studies on fishes in the inland water bodies

Impact of climate change in fisheries

Ongoing Project Details:

Sl.No	Title of the Project		PI & Co-PI of the Project	Funds (in Rs.)	Funding Agency
1	Production of Eicosapentaenoic acid (EPA) from marine diatom Phaeodactylum tricornutum isolated from the coastal waters of Gulf of mannar	2019-22	Dr.V.Rani	Rs.41,85,661/-	DST – SERB, Govt. of India, New Delhi
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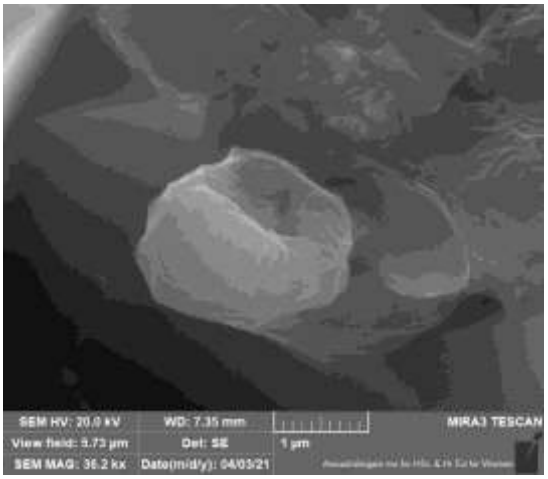
Ph.D. course – laboratories facilities :











6.4.5 Conduct of Practical and Hands-on-Training

The department has a full-fledged facility for the conduct of practical classes on aspects related to aquatic environment, water quality, soil analysis, conduct of challenge experiments in fish and shrimps.

6.4.6. SUPERVISION OF STUDENTS IN PG PROGRAMMES:

During the course work, PG students' academic progress is being monitored by PG batch coordinator in the rank of Professor & Head. In the second year (Research), progress of student's research is being monitored by the advisory committee comprising of Chairman and two advisors. Thed etails of PG students since the inception of the programme in the Department is given below:

Ph.D. Programme

S.No	Batch	Name of the Student	Research Topic	Name and designation of the Chair/ Major Advisor
1.	2015-16	T. Anand	Assessment of nitrogenous waste reduction efficiency of biofloc and periphyton based *Penaeus vannamei* (Boone, 1931) shrimp culture systems.	Dr. A. Srinivasan

2		A. Juliet Selvarani	Effect of Pesticides with reference to glyphosate and cyhalothrin on fresh water fishes of Thamirabarani river.	Dr. P. Padmavathy
3.		D. Manimekalai	Distribution and seasonal variation of persistent organochlorine residues in water, sediment and commercially important fishes at selected sites of Thamirabharani River	Dr. A. Srinivasan
4.	2017-18	S.Deepika	Effect of Triclosan (TCS) on commercially important fishes of Thamirabarani river	Dr. P. Padmavathy
5.	2019-20	K. Keerthika	Trophic level transfer of polyethylene and polypropylene microplastics in coastal waters of Thoothukudi	Dr.P.Padmavathy
6.		K. Abarna	Effect of culture media and environmental factors on growth and lipid accumulation of selected marine microalgal species	Dr.V.Rani
7.	2020-21	S.Subhashree Devasena	Efficiency assessment of bio - adsorbents prepared from fish scales in the treatment of municipal and seafood processing plant waste water from Thoothukudi District	Dr.P.Padmavathy

6.4.7. FEEDBACK OF STAKEHOLDERS (STUDENTS, PARENTS, INDUSTRIES, EMPLOYERS, FARMERS ETC.):

The academic sessions of the college are being assessed with feedback from the students regarding teaching through questionnaires and student counselling by PG coordinator and advisory committee.

6.4.8.STUDENT INTAKE AND ATTRITION IN THE PROGRAMME FOR LAST FIVE YEARS:

Name of the Degree Programme	**Actual student admitted in last five years**					**Attrition (%)**				
	2016-17	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**
Ph.D.	**1**	**1**	**0**	**2**	**1**	**0**	**0**	**0**	**0**	**0**

6.4.9. ICT APPLICATION IN CURRICULA DELIVERY:

Teaching through ICT tools is being followed for effective teaching by making use of the wi-fi campus facility and classroom environment. Ph.D. students' advisory committee sometimes comprises of faculty from other constituent units (working outside the student's institute) of the University. Therefore, there is monthly video conferencing research credits of Ph.D. programmes through online video conference mode.

Certificate

I, the Dean in-charge, **Dr. N.V.Sujathkumar** hereby certify that the information contained in the Section 6.4.1to 6.4.9 are furnished as per the records available in the college, and degree awarding university.



Signature of the Dean of the College with Date & Seal

TAMIL NADU Dr. J JAYALALITHAA FISHERIES UNIVERSITY

Self Study Report for Post Graduate Degree Programme (M.F.Sc. in Fish Processing Technology)

Submitted by

Fisheries College and Research Institute,
Thoothukudi – 628 008
Tamil Nadu

6.4. SELF STUDY REPORT FOR THE POST GRADUATE DEGREE PROGRAMME - M.F.SC IN FISH PROCESSING TECHNOLOGY

6.4.1. BRIEF HISTORY OF THE M.F.Sc IN FISH PROCESSING TECHNOLOGY DEGREE PROGRAMME:

The Department of Fish Processing Technology came into existence from the erstwhile Department of Fishery Technology, a founding member department of Fisheries College since its existence from 1977. This department has been offering fish processing technology courses for B.F.Sc., M.F.Sc., and Ph.D., degree programmes. The M.F.Sc degree programme in Fish Processing Technology was started in the year 1983 and produced 66 M.F.Sc dissertations addressing to various problems of seafood industry on the latest areas of research in fish processing until 2021. Currently Two M.F.Sc. students are pursuing their studies in Fish Processing Technology as on 2020-21.

M.F.Sc. Courses

S.No	Course No	Title of the course	Credit Hours
1	FPT 501	Technology of fish freezing and frozen storage	2+1
2	FPT 502	Thermal processing of fishery products	2+1
3	FPT 503	Quality assurance, management and certification	2+1
4	FPT 504	Applied fish biochemistry	2+1
5	FPT 505	Techniques in microbiology	1+1
6	FPT 506	Cured, dehydrated and smoked fishery products	1+1
7	FPT 507	Handling, storage and transport of fresh fish	1+1
8	FPT 508	Technology of minced – based fish products	1+1
9	FPT 509	Additives in fish processing	1+1
10	FPT 510	Fish by-products and utilization of fishery waste	1+1
11	FPT 511	Microorganisms of public health significance	1+1
12	FPT 512	Design, maintenance of fish processing plants & instrumentation	1+0

Student guidance for M.F.Sc.,

MFSc -2015-16

S.No	Department	Name of the faculty	Number of students guided
1	Fish Processing Technology	Dr. D. Sukumar	1

Research Title

1. Isolation of Omega 3 fatty acid producing bacteria from marine samples.

MFSc -2016-17

S.No	Department	Name of the faculty	Number of students guided
1	Fish Processing Technology	Dr. N.Neethiselvan	1
		Dr. R. JeyaShakila	1
		Dr. S. Balasundari	1

Research Title

1. Preparation of Fish Protein Powder from Low Value Freshwater Fish.
2. Effect of Different Cooking Methods on the Quality of Fish Cutlets From *Labeo rohita.*
3. Antioxidant and antibacterial propeties of cuttle fish ink collected from selected cuttlefish landed at Thoothukudi coast.

MFSc 2018-19

S.No	Department	Name of the faculty	Number of students guided
1	Fish Processing Technology	Dr. P. Velayutham	2

Research Title

1. Development of dry artificial fish bait for fish traps using fish processing and poultry wastes.
2. Harnessing tropical brown seaweed to drive nutritional and functional seaweed based product

MFSc 2019-20

S.No	Department	Name of the faculty	Number of students guided
1	Fish Processing Technology	Dr. P.Ganesan	1
		Dr. D. Sukumar	2

Research Title

1. Formulation of surumi based battered and breaded products from low value fishes and examination of their storage stability in chilled storage condition
2. Antioxidant effects of different fruit peel extracts on sardine fish under chilled condition

MFSc 2020-21

S.No	Department	Name of the faculty	Number of students guided
1	Fish Processing Technology	Dr. G. Sugumar	1
		Dr. P. Ganesan	1

Research Title

1. Comparative study on liquid organic fish fertilizer produced from marine and fresh water fish waste
2. Influence of different frying methods on retention of nutrient in ready to eat fried product from marine and fresh water.
3. Formulation of pasta products from defattened Pangius catfish.

6.4.2. FACULTY STRENGTH:

The faculty strength of Department of Fish Processing Technology is shown in the below table:

Sl.No.	Name of the Post	Sanctioned strength	Staff in position	No. of Vacancy
1.	Professor	1	0	1
2.	Associate Professor	1	0	1
3.	Assistant Professor	3	3	0
	Total	**5**	**3**	**2**

6.4.3. TECHNICAL AND SUPPORTING STAFF:

Sl. No.	Name of the Supporting Staff	Designation
1.	Th. V. Santhanasankar	Laboratory Assistant
2.	Th. S. Boobalan	Ice Man

6.4.4 CLASSROOMS AND LABORATORIES:

Laboratories:

- Bio-Chemistry Laboratory
- Microbiology Laboratory
- Pre Processing Unit
- Processing Unit

Facilities:

- UV Spectrophotometer
- KJeldhal apparatus
- Soxhlet Unit
- Hot air oven
- Muffle furnace
- Distillation unit
- Digestion unit
- Cooler unit
- Fiber analyser
- Incubator
- Viscometer
- Moisture Analyzer
- Weighing balance
- Vertical electrophoresis unit
- HPLC
- GC MS
- Centrifuge
- Water bath, heating mantle

Equipment at pre and main fish processing unit

- Fish cutting machine
- Deskinner
- Deboner
- Pasta making machine
- Twin screw extruder
- Pickle Filling machine
- Baking oven
- Planetary Mixer
- Decanter
- Double Jacket Kettle
- Over pressure retort
- Autoclave
- Drier
- Smoking kiln
- Blazt freezer
- Deep Freezer
- Ultra-Freezer
- Freezer (Refrigerator)
- Ice Flaking machine
- Vacuum packaging unit
- Bottle sealing machine
- Carton strapping machine
- Shrink wrapping machine
- Pedal sealing machine
- Horizontal sealing machine
- Coding machine
- Continuous band sealer



Biochemistry Lab



Preprocessing area



Production unit



Co-working space

Objectives:

1. To offer courses relating to Fish Processing Technology for B.F.Sc., M.F.Sc. and Ph.D. programmes
2. To undertake research projects / schemes in fish processing technology for the benefit of stake holders such as seafood processing plants and other entrepreneurs
3. To organize training programmes in fisheries trade particularly in fish processing for the women self help groups, fisherfolk, entrepreneurs and others to generate employment opportunities.

Current Focus

Current focus of the department is towards developing new products suitable for commercialization, exploring nutraceuticals from marine sources, addressing the quality issues faced by the industry and to identify and technological intervention on localized ethnic fish products with potential benefits to suit to global markets.

ONGOING PROJECT DETAILS: EDII – MARINE PRODUCTS BUSINESS INCUBATION FORUM

Title of the Scheme	:	Establishment of Marine Products Business Incubation Centre
Duration	:	3 Years
Funding Agency	:	Entrepreneurship Development and Innovation Institute
Date of Start	:	13.06.2019
Budget	:	Rs. 250 lakhs

EDII- Marine Products Business Incubation Forum (EDII- MPBIF) is functioning at Fisheries College and Research Institute, Thoothukudi with envisioned outcomes of networking, providing space, supporting innovators/start-ups focusing on marine products towards establishment of start-ups, provide incubation and mentoring support to existing entrepreneurs and to build small business opportunities to fishing community through Science & Technology intervention. The incubation centre provides host of services to new enterprises and facilitates linkages that are congenial for their survival and growth Under this scheme various machineries were erected for the development of innovative fish based products such as fish pickle, fish based bakery products, fish based battered and breaded products, fish based extruded products, pasta products, dried products, chilled products etc. Moreover sea weed processing units will also be erected to excel in the production of sea weed based edibles and fertilizers. Start-ups, existing firms, unemployed youth, self-help group can utilise these benefits offered under EDII- MPBIF, FCRI and can turn into a successful Entrepreneur. For adopting these technologies from the institute, entrepreneurs can be facilitated with office space with minimal charges. Any technical supports needed will also be arranged and given. Under this scheme innovative ideas and business strategies and plans for new start-ups are invited. Such proposals will be filed in EDII- Innovation Voucher Program (IVP) and the best ones will be selected and given a grant of either 2 lakh rupees or about 80% of total project/ proposal cost will be given as a grant.

Already existing projects will also be considered and granted with maximum of 5 lakh Rupees or about 50% of total project cost will be given as a grant in case of supporting the requirements of innovative ideas.

Currently there are total 16 incubatees registered to the forum and almost 21 Innovation Voucher Programs (IVP) have been submitted to EDII, Chennai. Furthermore, four MoUs were signed with the following colleges namely, Annamal college of education for women, Thoothukudi, Kamaraj college, Thoothukudi, Holy cross college, Thoothukudi

and Bishop heber college, Trichy. Till date total 8 training programs and 13 webinars were successfully conducted and the total number of beneficiaries account to 1063.

EDII – MPBIF has also acquired FSSAI Registration Certificate and Co-working space for facilitating the office space for the incubates was established and Profile and Standard Operating Procedure (SOP) for the incubation centre were also developed. The activities of EDII – MPBIF can be updated from the website www.ediimpbif.com.

Functions of EDII-MPBIF

- Technology Mentoring
- Capacity Building and Training
- Incubation services
- Product prototype development and product refinement
- Analytical services
- Support to get funding facilities
- Commercial scale production, IP Management and Business Development Support

Completed Project Detail:

S.No	Project Title	Funding Agency	Budgetreceived (Rs. In lakhs)	Duration
01.	Kayalagam – The Future Store for amplification of marketing of diversified fish products in Tamil Nadu	NADP	250.00	2018-2019

6.4.5. CONDUCT OF PRACTICAL AND HANDS-ON-TRAINING:

Biochemistry laboratory is to conduct the UG practical classes. Apart from this, lab is using for to analyse the proximate composition of fish such as protein, fat, ash and moisture. Fish products research and quality testing laboratory is to conduct PG practical classes and research purposes. Microbiology laboratory is to conduct UG and PG practical classes. It includes preparing stained smears, culturing micro-organisms, performing tests to identify bacteria and fungi, and studying microbial growth control method. Apart from this, the students are gaining first-hand knowledge in the subject.

6.4.6. SUPERVISION OF STUDENTS IN PG PROGRAMMES:

During the course work, PG student's academic progress is being monitored by PG batch coordinator in the rank of Professor & Head. In the second year (Research), progress of student's research is being monitored by the advisory committee comprising of Chairman and two advisors for PG student. The details of PG students since the inception of the programme in the Department is given below:

MFSc -2015-16

S.No	Department	Name of the faculty	Number of students guided
1	Fish Processing Technology	Dr. N.Neethiselvan	1
		Dr. R. JeyaShakila	1
		Dr. S. Balasundari	1

MFSc 2017-18

S.No	Department	Name of the faculty	Number of students guided
1	Fish Processing Technology	Dr. P. Velayutham	2

MFSc 2018-19

S.No	Department	Name of the faculty	Number of students guided
1	Fish Processing Technology	Dr. P.Ganesan	1
		Dr. D. Sukumar	2

MFSc 2019-20

S.No	Department	Name of the faculty	Number of students guided
1	Fish Processing Technology	Dr. G. Sugumar	1
		Dr. P. Ganesan	1

MFSc 2020-21

S.No	Department	Name of the faculty	Number of students guided
1	Fish Processing Technology	Dr. P.Ganesan	1

M.F.Sc

Sl. No.	Batch	Reg.No. of the Student	Name of the student	Research Topics	Name and designation of the Major Advisor
1.	2013-14	MFT 1312 (FPT)	N. Krishnaveni	Isolation of Omega 3 fatty acid producing bacteria from marine samples	Dr. D. Sukumar, Professor, DFPT, FCRI, Thoothukudi
2.	2013-14	MFT 1313 (FPT)	B. Meenachi	Preparation of Fish Protein Powder from Low Value Freshwater Fish	Dr. D. Sukumar, Professor, DFPT, FCRI, Thoothukudi
3.	2013-14	MFT 1311 (FPT)	Brita Nicy, A.	Antioxidant and antibacterial properties of cuttle fish ink collected from selected cuttlefish landed at Thoothukudi coast.	Dr. P. Velayutham, Professor and Head, DFPT, FCRI, ThoothukudI
4.	2014-15	MFT 14037 (FPT)	Siyyari Santhi Sumanjali	Effect of Different Cooking Methods on the Quality of Fish Cutlets From *Labeo rohita.*	Dr. P. Velayutham, Professor and Head, DFPT, FCRI, Thoothukudi
5.	2015-16	MFT 15058 (FPT)	K. Masilan	Development of dry artificial fish bait for fish traps using fish processing and poultry wastes.	Dr. N.Neethiselvan Professor and Head, DFE, FCRI, Thoothukudi
6.	2015-16	MFT 15060 (FPT)	K. Vijay	Harnessing tropical brown seaweed to drive nutritional and functional seaweed based product	Dr. S. Balasundari Professor and Head, DFPT, Dr.MGR FCRI, Ponneri
7.	2017-18	I-17-TN-03-002-M-F-049	Drishya Antony	Formulation of surumi based battered and breaded products from low value fishes and examination of their storage stability in chilled storage condition	Dr.P. Velayutham, Professor and Head, DFPT, FCRI, Thoothukudi
8.	2017-18	I-17-TN-03-002-M-F-041	Priyanka Dhruw	Antioxidant effects of different fruit peel extracts on sardine fish under chilled condition	Dr.P. Velayutham, Professor and Head, DFPT, FCRI, Thoothukudi

9.	2018-19	I-18-TN-03-002-M-F-031	Chayanika Das	Comparative study on liquid organic fish fertilizer produced from marine and fresh water fish waste	Dr. D. Sukumar, Professor, DFPT, FCRI, Thoothukudi
10.	2018-19	I-18-TN-03-002-M-F-019	Raviprasad	Influence of different frying methods on retention of nutrient in ready to eat fried product from marine and fresh water.	Dr. D. Sukumar, Professor, DFPT, FCRI, Thoothukudi
11.	2018-19	U-18-TN-03-002-M-F-018	S. Kothandaperumal.S	Defattening of catfish (*Pangasius* sp.) fillets and their utilization for development of pasta products.	Dr. P. Ganesan Assistant Professor, DFPT, FCRI, Thoothukudi
12.	2019-20	U-19-TN-03-002-M-F-003	Kavinesan.K.	Detection and characterization of shiga toxigenic *Escherichia coli*(STEC) in fresh seafood landed and marketed in Thoothukudi	Dr. G. Sugumar Vice-Chancellor, TNJFU, Nagapattinam
13.	2019-20	I-19-TN-03-002-M-F-008	Praisy M Shaju	Antioxidant, antibacterial and functional characteristics of melanin and melanin free ink from selected cephalopod species.	Dr. P. Ganesan Assistant Professor, DFPT, FCRI, Thoothukudi

FEEDBACK OF STAKEHOLDERS (STUDENTS, PARENTS, INDUSTRIES, EMPLOYERS, FARMERS ETC.):

The academic sessions of the college are being assessed with feedback from the students regarding teaching through questionnaires and student counseling by PG coordinator and advisory committee.

6.4.8. STUDENT INTAKE AND ATTRITION IN THE PROGRAMME FOR LAST FIVEYEARS:

Name of the Degree Programme	Actual student admitted in last five years					Attrition (%)				
	2016-17	2017-18	2018-19	2019-20	2020-21	2016-17	2017-18	2018-19	2019-20	2020-21

M.F.Sc (Fish Processing Technology)	2	2	5	2	3	0	0	0	0	0

6.4.9. ICT APPLICATION IN CURRICULADELIVERY:

Teaching through ICT tools is being followed for effective teaching by making use of the wi-fi campus facility and classroom environment. PG student's advisory committee sometimes comprises of faculty from other constituent units (working outside the student's institute) of the University. Therefore, there is a monthly video conferencing among the advisory committee members to monitor the progress as well as to evaluate research credits of PG programmes through online video conference mode.

Certificate

I, the Dean in-charge, **Dr. N.V. Sujathkumar** hereby certify that the information contained in the Section 6.4.1 to 6.4.9 is furnished as per the records available in the college, and degree awarding university.



Signature of the Dean of the college with Date & Seal

TAMIL NADU Dr. J JAYALALITHAA FISHERIES UNIVERSITY

Self Study Report for Post Graduate Degree Programme (Ph.D. in Fish Processing Technology)

Submitted by

Fisheries College and Research Institute,
Thoothukudi – 628 008
Tamil Nadu

6.4. SELF STUDY REPORT FOR THE POST GRADUATE DEGREE PROGRAMME - Ph.D. IN FISH PROCESSING TECHNOLOGY

6.4.1. BRIEF HISTORY OF THE Ph.D. IN FISH PROCESSINGTECHNOLOGY DEGREE PROGRAMME:

The Department of Fish Processing Technology came into existence from the erstwhile Department of Fishery Technology, a founding member department of Fisheries College since its existence from 1977. This department has been offering fish processing technology courses for B.F.Sc., M.F.Sc., and Ph.D., degree programmes. Four Ph.D dissertations addressing to various problems of seafood industry on the latest areas of research in fish processing until 2021. Currently Four Ph.D. students students are pursuing their studies in Fish Processing Technology as on 2020-21.

Ph.D Courses

S.No	Course No	Title of the course	Credit Hours
1	FPT 601	Bio – chemical technique in fish analysis	2+1
2	FPT 602	Functional properties of proteins from fish and shellfish	2 +1
3	FPT 603	Quality Management System	2+1
3	FPT 604	Lipids of aquatic origin	2+1
4	FPT 606	Vitamins, minerals &flavor bearing components in aquatic organisms	2+1
5	FPT 610	Fishery by products, specialty products and value added products	2+1

Student guidance for Ph.D.

Ph.D. 2015-16

S.No	Department	Name of the faculty	Number of students guided
1	Fish Processing Technology	Dr. K. Rathnakumar	1

Ph.D. 2016-17

S.No	Department	Name of the faculty	Number of students guided
1	Fish Processing Technology	Dr. P. Velayutham	1

Ph.D. 2018 – 19

S.No	Department	Name of the faculty	Number of students guided
1	Fish Processing Technology	Dr. D. Sukumar	2

Ph.D. 2020-21

S.No	Department	Name of the faculty	Number of students guided
1	Fish Processing Technology	Dr. P. Ganesan	2

6.4.2. FACULTY STRENGTH:

The faculty strength of Department of Fish Processing Technology is shown in the below table:

Sl.No.	Name of the Post	Sanctioned strength	Staff in position	No. of Vacancy
1.	Professor	1	0	1
2.	Associate Professor	1	0	1
3.	Assistant Professor	3	3	0
	Total	**5**	**3**	**2**

6.4.3. TECHNICAL AND SUPPORTING STAFF:

Sl. No.	Name of the Supporting Staff	Designation
1.	Th. V. Santhanasankar	Laboratory Assistant
2.	Th. S. Boobalan	Ice Man

6.4.4. CLASS ROOMS AND LABORATORIES:

Laboratories:

- Bio-Chemistry Laboratory
- Microbiology Laboratory
- Pre Processing Unit
- Processing Unit

Facilities:

- UV Spectrophotometer
- KJeldhal apparatus
- Soxhlet Unit
- Hot air oven
- Muffle furnace
- Distillation unit
- Digestion unit
- Cooler unit
- Fiber analyser

- Incubator
- Viscometer
- Moisture Analyzer
- Weighing balance
- Vertical electrophoresis unit
- HPLC
- GC MS
- Centrifuge
- Water bath, heating mantle

Equipment at pre and main fish processing unit

- Fish cutting machine
- Deskinner
- Deboner
- Pasta making machine
- Twin screw extruder
- Pickle Filling machine
- Baking oven
- Planetary Mixer
- Decanter
- Double Jacket Kettle
- Over pressure retort
- Autoclave
- Drier
- Smoking kiln
- Blazt freezer
- Deep Freezer
- Ultra-Freezer
- Freezer (Refrigerator)
- Ice Flaking machine
- Vacuum packaging unit
- Bottle sealing machine
- Carton strapping machine
- Shrink wrapping machine
- Pedal sealing machine
- Horizontal sealing machine
- Coding machine
- Continuous band sealer



Biochemistry Lab



Preprocessing area



Production unit



Co-working space

Objectives:

1. To offer courses relating to Fish Processing Technology for B.F.Sc., M.F.Sc. and Ph.D. programmes
2. To undertake research projects / schemes in fish processing technology for the benefit of stake holders such as seafood processing plants and other entrepreneurs
3. To organize training programmes in fisheries trade particularly in fish processing for the women self help groups, fisherfolk, entrepreneurs and others to generate employment opportunities

Current Focus

Current focus of the department is towards developing new products suitable for commercialization, exploring nutraceuticals from marine sources, addressing the quality issues faced by the industry and to identify and technological intervention on localized ethnic fish products with potential benefits to suit to global markets.

ONGOING PROJECT DETAILS:

EDII – MARINE PRODUCTS BUSINESS INCUBATION FORUM

Title of the Scheme	:	Establishment of Marine Products Business Incubation Centre
Duration	:	3 Years
Funding Agency	:	Entrepreneurship Development and Innovation Institute
Date of Start	:	13.06.2019
Budget	:	Rs. 250 lakhs

EDII- Marine Products Business Incubation Forum (EDII- MPBIF) is functioning at Fisheries College and Research Institute, Thoothukudi with envisioned outcomes of networking, providing space, supporting innovators/start-ups focusing on marine products towards establishment of start-ups, provide incubation and mentoring support to existing entrepreneurs and to build small business opportunities to fishing community through Science & Technology intervention. The incubation centre provides host of services to new enterprises and facilitates linkages that are congenial for their survival and growth Under this scheme various machineries were erected for the development of innovative fish based

products such as fish pickle, fish based bakery products, fish based battered and breaded products, fish based extruded products, pasta products, dried products, chilled products etc. Moreover sea weed processing units will also be erected to excel in the production of sea weed based edibles and fertilizers. Start-ups, existing firms, unemployed youth, self-help group can utilise these benefits offered under EDII- MPBIF, FCRI and can turn into a successful Entrepreneur. For adopting these technologies from the institute, entrepreneurs can be facilitated with office space with minimal charges. Any technical supports needed will also be arranged and given. Under this scheme innovative ideas and business strategies and plans for new start-ups are invited. Such proposals will be filed in EDII- Innovation Voucher Program (IVP) and the best ones will be selected and given a grant of either 2 lakh rupees or about 80% of total project/ proposal cost will be given as a grant.

Already existing projects will also be considered and granted with maximum of 5 lakh Rupees or about 50% of total project cost will be given as a grant in case of supporting the requirements of innovative ideas.

Currently there are total 16 incubatees registered to the forum and almost 21 Innovation Voucher Programs (IVP) have been submitted to EDII, Chennai. Furthermore, four MoUs were signed with the following colleges namely, Annamal college of education for women, Thoothukudi, Kamaraj college, Thoothukudi, Holy cross college, Thoothukudi and Bishop heber college, Trichy. Till date total 8 training programs and 13 webinars were successfully conducted and the total number of beneficiaries account to 1063.

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Functions of EDII-MPBIF

- Technology Mentoring
- Capacity Building and Training
- Incubation services
- Product prototype development and product refinement
- Analytical services
- Support to get funding facilities
- Commercial scale production, IP Management and Business Development Support

Completed Project Detail:

S.No	Project Title	Funding Agency	Budgetreceived (Rs. In lakhs)	Duration
01.	Kayalagam – The Future Store for amplification of marketing of diversified fish products in Tamil Nadu	NADP	250.00	2018-2019

6.4.5. CONDUCT OF PRACTICAL AND HANDS-ON-TRAINING:

Biochemistry laboratory is to conduct the practical classes. Apart from this, lab is using for to analyse the proximate composition of fish such as protein, fat, ash and moisture. Fish products research and quality testing laboratory is to conduct Ph.D. practical classes and research purposes. Microbiology laboratory is to conduct Ph.D. practical classes. It includes preparing stained smears, culturing micro-organisms, performing tests to identify bacteria and fungi, and studying microbial growth control method. Apart from this, the students are gaining first-hand knowledge in the subject.

6.4.6. SUPERVISION OF STUDENTS IN PG & Ph.D. PROGRAMMES:

During the course work, Ph.D student's academic progress is being monitored by Ph.D. batch coordinator in the rank of Professor & Head. In the second year (Research), progress of student's research is being monitored by the advisory committee comprising of one Chairman and three advisory committee members for each Ph.D. student. The details of Ph.D. students since the inception of the programme in the Department is given below:

Sl. No.	Batch	Reg.No. of the Student	Name of the student	Research Topics	Name and designation of the Major Advisor
1.	2013-14	DPF 1303 (FPT)	K. Hema	Development of shelf stable imitated shrimp product from *Saurida tumbil (*Lizard fish)	Dr.P. Velayutham, Professor and Head, DFPT, FCRI, Thoothukudi
2.	2014-15	DPF 14011 (FPT)	Vinothkumar.L.	Bioactive Properties of collagen peptides derived from fish skin using enzymes of marine origin	Dr. R. Jeya Shakila, and Head, DFQAM FCRI, Thoothukudi

3.	2015-16	DPF 15019 (FPT)	P. Ganesan	Formulation of Seafood Based Extruded Snack Products and Examination of their Bioactive Functional Properties and Storage Stability	Dr.K.Rathnakumar Registrar, TNJFU, Nagapattinam
4.	2016-17	DPF (T) 16029 (FPT)	A. Brita Nicy	Studies on nutritional, Structural, Functional and stability characteristics of bakery products formulated with surimi powder	Dr.P. Velayutham, Professor and Head, DFPT, FCRI, Thoothukudi
5.	2018-19	U-18-TN-03-002-D-F-007	F. Parthiban	Development of improved biodegradable packaging film from chitosan and seaweed polysaccharides as an alternative to plastic packaging.	Dr. G. Sugumar Vice-Chancellor, TNJFU, Nagapattinam
6.	2018-19	U-18-TN-03-002-D-F-006	K.Masilan	Physicochemical characterisation of marine-based biopolymers and bioattractants for the development of artificial fish baits.	Dr.N.Neethiselvan Professor and Head, DFE, FCRI, Thoothukudi
7.	2018-19	U-18-TN-03-002-D-F-005	Gayatri Pandey	Application of advanced processing technologies for the development of seaweed based products	Dr.P. Velayutham, Professor and Head, DFPT, FCRI, Thoothukudi
8.	2018-19	I-18-TN-03-002-D-F-012	Sumit Kumar Verma	Microwave processing for drying, blanching and thawing of shrimp (*Metapenaeus dobsonii*)**:** Evaluation and quality characterization	Dr.P. Velayutham, Professor and Head, DFPT, FCRI, Thoothukudi
9.	2020-21	U-14-TN-03-002-B-F-040 (FPT)	DEVADHARSHINI S	Studies on physico-chemical, bioactive properties and storage stability of surimi sausage incorporated with *Kappaphycus* sp. derivatives	Dr. P. Ganesan Assistant Professor and Head, DFPT, FCRI, Thoothukudi

10.	2020-21	U-20-TN-03-002-D-F-006	SRAVANI.K	Formulation of seaweed based edible tableware and assessment of its physic-chemical, mechanical, bioactive properties and storage stability	Dr. P. Ganesan Assistant Professor and Head, DFPT, FCRI, Thoothukudi

Ph.D. 2015-16

S.No	Department	Name of the faculty	Number of students guided
1	Fish Processing Technology	Dr. K. Rathnakumar	1

Research title

1. Formulation of seafood based extruded snack products and examination of their bioactive functional properties and storage stability.

Ph.D. 2016-17

S.No	Department	Name of the faculty	Number of students guided
1	Fish Processing Technology	Dr. P. Velayutham	1

Research title

1. Studies on nutritional structural functional and stability characteristics of bakery products formulated with surimi powder

Ph.D. 2018 – 19

S.No	Department	Name of the faculty	Number of students guided
1	Fish Processing Technology	Dr. D. Sukumar	2

Research title

1. Application of advanced processing technologies for the development of seaweed based products.
2. Assessment and characterization of marker volatile compound during spoilage of shrimp (*L. Vannamei)* and yellow fin tuna (*Thunnus albacores*) under different processing condition.

Ph.D. 2020-21

S.No	Department	Name of the faculty	Number of students guided
1	Fish Processing Technology	Dr. P. Ganesan	2

Research Title

1. Studies on physico-chemical, bioactive properties and storage stability of surimi sausage incorporated with *Kappaphycus* sp. derivatives.
2. Formulation of seaweed based edible tableware and assessment of its physic-chemical, mechanical, bioactive properties and storage stability.

6.4.7. FEEDBACK OF STAKEHOLDERS (STUDENTS, PARENTS, INDUSTRIES, EMPLOYERS, FARMERS ETC.):

The academic sessions of the college are being assessed with feedback from the students regarding teaching through questionnaires and student counseling by Ph.D. coordinator and advisory committee.

6.4.8. STUDENT INTAKE AND ATTRITION IN THE PROGRAMME FOR LAST FIVE YEARS:

Name of the Degree Programme	Actual student admitted in last five years					Attrition (%)				
	2016-17	2017-18	2018-19	2019-20	2020-21	2016-17	2017-18	2018-19	2019-20	2020-21
Ph.D. (Fish Processing Technology)	**4**	**3**	7	**1**	**3**	**0**	**0**	**0**	0	0

6.4.9. ICT APPLICATION IN CURRICULADELIVERY:

Teaching through ICT tools is being followed for effective teaching by making use of the wi-fi campus facility and classroom environment. Ph.D. student's advisory committee sometimes comprises of faculty from other constituent units (working outside the student's institute) of the University. Therefore, there is a monthly video conferencing among the advisory committee members to monitor the progress as well as to evaluate research credits of Ph.D. programmes through online video conference mode.

Certificate

I, the Dean in-charge, **Dr. N.V. Sujathkumar** hereby certify that the information contained in the Section 6.4.1 to 6.4.9 is furnished as per the records available in the college, and degree awarding university.



Signature of the Dean of the college with Date & Seal

TAMIL NADU Dr. J JAYALALITHAA FISHERIES UNIVERSITY

Self Study Report for Post Graduate Degree Programme (M.F.Sc. in Fisheries Engineering and Technology)

Submitted by

Fisheries College and Research Institute,
Thoothukudi – 628 008
Tamil Nadu

6.4. SELF STUDY REPORT FOR THE POST GRADUATE DEGREE PROGRAMME - M.F.SC IN FISHERIES ENGINEERING AND TECHNOLOGY

6.4.1. BRIEF HISTORY OF THE M.F.Sc IN FISHERIES ENGINEERING AND TECHNOLOGY DEGREE PROGRAMME:

The Department of Fishing Technology and Fisheries Engineering was started during the year 1988 with the objective of undertaking teaching, research and extension in the field of Fishing Technology and Fisheries Engineering. Considering the urgent need for the technical and professional man power in the field of Fishing Technology and Fisheries Engineering of the state, the department has started offering M.F.Sc (Fishing Technology and Fisheries Engineering) degree programme from the year 1991. Further, M.F.Sc (Fisheries Engineering and Technology) degree programme as per the ICAR common syllabus is being offered from the year 2010. The department is also offering Doctoral degree programme (Fisheries Engineering and Technology) from the year and 2017. Besides offering the education, it undertakes research projects pertaining to the development of eco-friendly fishing gears. This department is actively involved in training fishermen on "Responsible fishing, Engine Maintenance, Sea safety, and maintenance of Fishing harbours and landing centres"

Course offered

Sl.No	Course No	Title of the Course	Credit Hours
		Major Courses	
1	FET 501	Advanced Fishing Gear Technology	2+1
2	FET 502	Advanced Fishing Craft Technology	2+1
3	FET 503	Responsible Fishing	2+1
4	FET 504	Refrigeration and Electrical Engineering	2+1
5	FET 505	Marine Engineering	1+1
6	FET 508	Fishing Harbour and Fleet Management	1+1
7	FET 511	Fish Processing Machinery	1+1
8	FET 512	Acoustics, Navigation and Seamanship	1+1
		Minor Courses	
1	FET 506	Aquacultural Engineering	1+1
2	FET 507	Engineering Graphics	0+1
3	FET 509	Environmental Engineering and Pollution	1+1
4	FET 510	Sea safety and Disaster Management	1+0

MFSc -2015-16

S.No	Department	Name of the faculty	Number of students guided
1	Fishing Technology and Fisheries Engineering	Dr. N.Neethiselvan	1
		Dr. B. Sundaramoorthy	1

S.No	Department	Name of the faculty	Number of students guided
1	Fishing Technology and Fisheries Engineering	Dr. N.Neethiselvan	1

6.4.2. FACULTY STRENGTH:

The faculty strength of Department of Fishing Technology and Fisheries Engineering is shown in the below table:

Sl.No.	Name of the Post	Sanctioned strength	Staff in position	No. of Vacancy	Recommendations of V Deans' Committee
1.	Professor	0	0	0	
2.	Associate Professor	1	0	1	
3.	Assistant Professor	2	2	0	
	Total	**3**	**2**	**1**	

6.4.3. TECHNICAL AND SUPPORTING STAFF:

The Department of Fishing Technology and Fisheries Engineering has two units, one in the main campus of Fisheries College and Research Institute, Thoothukudi and another in the shore campus which is located inside the Fishing harbour of Thoothukudi. The following are the different facilities to undertake teaching, research and extension in the field of fishing technology and fisheries engineering. The details of technical and supporting staff are given below:

S. No.	Sanctioned staff	Faculty in place	Vacant position
1.	Skipper	1	0
2.	Bosun	1	0
3.	Deckhands	2	0
4.	Mechanic Grade II	1	0
5.	Sea man	1	0

6.4.4. CLASSROOMS AND LABORATORIES:

MAIN CAMPUS FACILITIES:

The Department of Fishing Technology and Fisheries Engineering has two units, one in the main campus of Fisheries College and Research Institute, Thoothukudi and another in the shore campus which is located inside the Fishing harbour of Thoothukudi. The following are the different facilities to undertake teaching, research and extension in the field of fishing technology and fisheries engineering.

(i) Facilities available at main unit

Sl. No	Facilities	Utility
1	Marine engineering workshop - 100 hp marine diesel engine with propeller arrangement - Cut out and working models of diesel and petrol engines - Engines parts display - Refrigeration test rig - Diesel engine test rig - Trawl winch assembly - Fire extinguishers	(i) For demonstration of marine engine related aspects to undergraduate and postgraduates programmes. (ii) To offer short term training programme to fishermen of both motorized and mechanized fishing vessels.
2	Fuel pump test laboratory - Fuel pump test bench - Accessories and tools for fuel pump test	(i) To conduct practical classes to postgraduate students (ii) To conduct entrepreneurial training programme to interested fishermen
3	Fishing gear and craft model display unit - Models of different fishing craft - Models of different fishing gears - Fishing accessories and implements	(i) To conduct practical classes in the field of Fishing gear technology and Fishing craft technology both under undergraduate and postgraduate programmes.
4	Marine electronic laboratory - GPS - VHF communication system - Echosounder - Chart plotter - Wind monitor	(i) To conduct practical classes in the field of Marine electronic equipments both under undergraduate and postgraduate programmes.
5	Navigation chart reading and nautical science laboratory - Fishing vessel signal flags - Signal lights - Chart reading and drawing tables - Navigational charts - Compass - Sextant - Lifesaving appliances - DAT	To conduct practical classes in the field of Navigation and Seamanship both under undergraduate and postgraduate programmes.



Navigation chart reading hall



Chart reading

	
Navigation flag signal	**Navigation light signal**
	
Lifesaving appliances	**Marine Electronic Laboratory**
	
Fishing craft models	

6.4.5. Conduct of practical and hands on training :

(ii) Facilities available at Shore Campus

Sl. No.	Facilities	Utility
1	**Fishing gear fabrication unit** - Net braiding bars - Braiding tools - Otter boards - Rope works and wires - Fishing gear accessories	To conduct practical classes in the field of Fishing gear fabrication both under undergraduate and postgraduate programmes.
2	**Fishing boats and engines** - FRP Boat 18 ft - FRP Vallam 23 ft - Out board engines – 2 Numbers (25HP) - Boat accessories	To conduct practical classes in the field of Fishing boats and engines both under undergraduate and postgraduate programmes.





Students practicing fabrication of fishing net



Students operating gill net



Students operating Bongo net for eggs and larval collection



Hands on training on model trawl net making



Students practicing mending of fishing net



Students on field visit at Motta kopuram



Fiber Reinforced Plastic fishing boat



25 P Outboard Engine

6.4.6 SUPERVISION OF STUDENTS IN PG PROGRAMMES:

During the course work, PG student's academic progress is being monitored by PG batch coordinator in the rank of Professor & Head. In the second year (Research),progress of student's research is being monitored by the advisory committee comprising of Chairman and two advisors. The details of PG students since the inception of the programme in the Department is given below:

Completed

S.No	Batch	Reg. No of the Student	Name of the Student	Research Topic	Name and designation of the Chair/ Major Advisor
1	2018-19	I-18-TN-03-002-M-F-032	Anand Vaishnav	Study on Crab fishing along Ramanathapuram Coast of Tamil Nadu	Dr.B. Sundaramoorthi Dean, Fisheries College & Research Institute, Thoothukudi

Ongoing

S.No	Batch	Reg. No of the Student	Name of the Student	Research Topic	Name and designation of the Chair/ Major Advisor
1	2018-19	U-18-TN-03- 002-M-F-002	Jobin Jacob	Comparative analysis on the technical status of Deepsea Tuna Gill Nets operated from Thoothoor and Tharuvaikulam fishing villages of Tamil Nadu	Dr.N.Neethiselvan Director, Directorate of Incubation and Vocational Training in Fisheries, Ramanathapuram

Discontinue

S.No	Batch	Reg. No of the Student	Name of the Student	Research Topic	Name and designation of the Chair/ Major Advisor
1	2018-19	U-18-TN-03- 002-M-F-021	A.Karthikeyan	"Technical analysis on the deep sea Tuna longline fishing gears of Kanyakumari district, South coast of India"	Dr.N.Neethiselvan Director, Directorate of Incubation and Vocational Training in Fisheries, Ramanathapuram

6.4.7. FEEDBACK OF STAKEHOLDERS (STUDENTS, PARENTS, INDUSTRIES, EMPLOYERS, FARMERS ETC.):

The academic sessions of the college are being assessed with feedback from the students regarding teaching through questionnaires and student counseling by PG coordinator and advisory committee.

6.4.8. STUDENT INTAKE AND ATTRITION IN THE PROGRAMME FOR LAST FIVE YEARS:

Name of the Degree Programme	Actual student admitted in last five years					Attrition (%)				
	2016-17	2017-18	2018-19	2019-20	2020-21	2016-17	2017-18	2018-19	2019-20	2020-21
M.F.Sc (Fisheries Engineering and Technology)	3	3	0	3	3	0	33.3	0	33.3	0

6.4.9. ICT APPLICATION IN CURRICULA DELIVERY:

Teaching through ICT tools is being followed for effective teaching by making use of the wi-fi campus facility and classroom environment. PG/Ph.D. student's advisory committee sometimes comprises of faculty from other constituent units (working outside the student's institute) of the University. Therefore, there is a monthly video conferencing among the advisory committee members to monitor the progress as well as to evaluate research credits of PG/Ph.D. programmes through online video conference mode.

Certificate

I, the Dean in-charge, **Dr. N.V. Sujathkumar** hereby certify that the information contained in the Section 6.4.1 to 6.4.9 is furnished as per the records available in the college, and degree awarding university.



Signature of the Dean of the college with Date & Seal

TAMIL NADU Dr. J JAYALALITHAA FISHERIES UNIVERSITY

Self Study Report for Post Graduate Degree Programme (Ph.D. in Fisheries Engineering and Technology)

Submitted by

Fisheries College and Research Institute,
Thoothukudi – 628 008
Tamil Nadu

6.4.1. BRIEF HISTORY OF THE Ph.D. IN FISHERIES ENGINEERING AND AND TECHNOLOGY DEGREE PROGRAMME:

The Department of Fishing Technology and Fisheries Engineering was started during the year 1988 with the objective of undertaking teaching, research and extension in the field of Fishing Technology and Fisheries Engineering. Considering the urgent need for the technical and professional man power in the field of Fishing Technology and Fisheries Engineering of the state, the department has started offering M.F.Sc (Fishing Technology and Fisheries Engineering) degree programme from the year 1991. Further, M.F.Sc (Fisheries Engineering and Technology) degree programme as per the ICAR common syllabus is being offered from the year 2010. The department is also offering Doctoral degree programme (Fisheries Engineering and Technology) from the year and 2017. Besides offering the education, it undertakes research projects pertaining to the development of eco-friendly fishing gears. This department is actively involved in training fishermen on "Responsible fishing, Engine Maintenance, Sea safety, and maintenance of Fishing harbours and landing centres".

Course offered:

Sl.No	Course No	Title of the Course	Credit Hours
1	FET 601	Mechanization in fishing	2+1
2	FET 602	Advanced fishing gear design and construction	2+1
3	FET 603	Advanced fishing craft design and construction	2+1
4	FET 604	Fishing gear selectivity	1+1
5	FET 605	Sustainable fishing methods	2+1
6	FET 606	Electronic navigation and sea safety for fishing vessels	2+1
7	FET 607	Fishing harbour, planning, construction and management	2+1
1	FET 691	Doctoral seminar I	1+0
2	FET 692	Doctoral seminar II	1+0
3	FET 699	Doctoral research	45

Ph.D. 2018-19

S.No	Department	Name of the faculty	Number of students guided
1	Fishing Technology and Fisheries Engineering	Dr. N.Neethiselvan	1 (Continuing)

Ph.D. 2019-20

S.No	Department	Name of the faculty	Number of students guided
1	Fishing Technology and Fisheries Engineering	Dr. B. Sundaramoorthy	1 (Discontinued)

Ph.D. 2020-21

S.No	Department	Name of the faculty	Number of students guided
1	Fishing Technology and Fisheries Engineering	Dr. B. Sundaramoorthi	1 (Current year)
		Dr. Neethiselvan	1 (Current year)

6.4.3. TECHNICAL AND SUPPORTING STAFF:

The Department of Fishing Technology and Fisheries Engineering has two units, one in the main campus of Fisheries College and Research Institute, Thoothukudi and another in the shore campus which is located inside the Fishing harbour of Thoothukudi. The following are the different facilities to undertake teaching, research and extension in the field of fishing technology and fisheries engineering. The details of technical and supporting staff are given below:

S. No.	Sanctioned staff	Faculty in place	Vacant position
1.	Skipper	1	0
2.	Bosun	1	0
3.	Deckhands	2	0
4.	Mechanic Grade II	1	0
5.	Sea man	1	0

6.4.4. CLASSROOMS AND LABORATORIES:

MAIN CAMPUS FACILITIES:

The Department of Fishing Technology and Fisheries Engineering has two units, one in the main campus of Fisheries College and Research Institute, Thoothukudi and another in the shore campus which is located inside the Fishing harbour of Thoothukudi. The following are the different facilities to undertake teaching, research and extension in the field of fishing technology and fisheries engineering.

(i) Facilities available at main unit

Sl. No	Facilities	Utility
1	Marine engineering workshop - 100 hp marine diesel engine with propeller arrangement - Cut out and working models of diesel and petrol engines - Engines parts display - Refrigeration test rig - Diesel engine test rig - Trawl winch assembly - Fire extinguishers	(i) For demonstration of marine engine related aspects to undergraduate and postgraduates programmes. (ii) To offer short term training programme to fishermen of both motorized and mechanized fishing vessels.
2	Fuel pump test laboratory - Fuel pump test bench - Accessories and tools for fuel pump test	(i) To conduct practical classes to postgraduate students (ii) To conduct entrepreneurial training programme to interested fishermen
3	Fishing gear and craft model display unit - Models of different fishing craft - Models of different fishing gears - Fishing accessories and implements	(i) To conduct practical classes in the field of Fishing gear technology and Fishing craft technology both under undergraduate and postgraduate programmes.
4	Marine electronic laboratory - GPS - VHF communication system - Echosounder - Chart plotter - Wind monitor	(i) To conduct practical classes in the field of Marine electronic equipments both under undergraduate and postgraduate programmes.
5	Navigation chart reading and nautical science laboratory - Fishing vessel signal flags - Signal lights - Chart reading and drawing tables - Navigational charts - Compass - Sextant - Lifesaving appliances - DAT	To conduct practical classes in the field of Navigation and Seamanship both under undergraduate and postgraduate programmes.



Navigation chart reading hall



Chart reading



Marine Engineering Workshop



Working model of Marine engine



Fuel Pump test bench

6.4.5. Conduct of practical and hands on training :

(ii) Facilities available at Shore Campus

Sl. No.	Facilities	Utility
1	**Fishing gear fabrication unit** - Net braiding bars - Braiding tools - Otter boards - Rope works and wires - Fishing gear accessories	To conduct practical classes in the field of Fishing gear fabrication both under undergraduate and postgraduate programmes.
2	**Fishing boats and engines** - FRP Boat 18 ft - FRP Vallam 23 ft - Out board engines – 2 Numbers (25HP) - Boat accessories	To conduct practical classes in the field of Fishing boats and engines both under undergraduate and postgraduate programmes.



Students operating gill net



Students operating Bongo net for eggs and larval collection



Hands on training on model trawl net making



Students practicing mending of fishing net



Students on field visit at Motta kopuram



Fiber Reinforced Plastic fishing boat

6.4.6. SUPERVISION OF STUDENTS IN PG PROGRAMMES:

During the course work, PG student's academic progress is being monitored by PG batch coordinator in the rank of Professor & Head. In the second year (Research),progress of student's research is being monitored by the advisory committee comprising of Chairman and two advisors. The details of PG students since the inception of the programme in the Department is given below:

S.No	Batch	Reg. No of the Student	Name of the Student	Research Topic	Name and designation of the Chair/ Major Advisor
1	2018-19	(U-18-TN-03-002-D-F-009)	T.Ravikumar	"Investigations on the effect of hook size, hook shape and baits on the catching efficiency and selectivity of long lines along Gulf of Mannar coast"	Dr.N.Neethiselvan Director, Directorate of Incubation and Vocational Training in Fisheries, Ramanathapuram

6.4.7. FEEDBACK OF STAKEHOLDERS (STUDENTS, PARENTS, INDUSTRIES, EMPLOYERS, FARMERS ETC.):

The academic sessions of the college are being assessed with feedback from the students regarding teaching through questionnaires and student counseling by PG coordinator and advisory committee.

6.4.8. STUDENT INTAKE AND ATTRITION IN THE PROGRAMME FOR LAST FIVE YEARS:

Name of the Degree Programme	Actual student admitted in last five years					Attrition (%)				
	2016-17	2017-18	2018-19	2019-20	2020-21	2016-17	2017-18	2018-19	2019-20	2020-21
M.F.Sc (Fisheries Engineering and Technology)	0	0	1	0	1	0	0	0	0	0

6.4.9. ICT APPLICATION IN CURRICULA DELIVERY:

Teaching through ICT tools is being followed for effective teaching by making use of the wi-fi campus facility and classroom environment. PG/Ph.D. student's advisory committee sometimes comprises of faculty from other constituent units (working outside the student's institute) of the University. Therefore, there is a monthly video conferencing among the advisory committee members to monitor the progress as well as to evaluate research credits of PG/Ph.D. programmes through online video conference mode.

Certificate

I, the Dean in-charge, **Dr. N.V. Sujathkumar** hereby certify that the information contained in the Section 6.4.1 to 6.4.9 is furnished as per the records available in the college, and degree awarding university.



Signature of the Dean of the college with Date & Seal

TAMIL NADU Dr. J JAYALALITHAA FISHERIES UNIVERSITY

Self Study Report for Post Graduate Degree Programme (M.F.Sc. in Fish Quality Assurance and Management)

Submitted by

Fisheries College and Research Institute,
Thoothukudi – 628 008
Tamil Nadu

6.4. Self Study Report for the MFSc Programme for the Department of Fish Quality Assurance and Management

6.4.1. Brief History of the Degree Programme:

Master of Fisheries Science (M.F.Sc) in Fish Quality Assurance and Management is offered by the Department of Fish Quality Assurance and Management at Fisheries College and Research Institute, Thoothukudi. The MFSc programme was started in the year 2012. The objectives of the Department are

1. To offer M.F.Sc and Ph.D. degree programme in Fish Quality Assurance and Management
2. To offer courses pertaining to fish quality and safety to the B.F.Sc. degree students
3. To carry out research projects in the areas of fish quality and safety
4. To guide the PG students in the field of fish quality assurance
5. To impart training to the fish quality control technologists, fish processors, fisher folk, SHGs, etc. on fish quality and safety management programmes
6. To serve as fish quality monitoring and certification centre for testing the quality of fish and fish products and issuing quality certificates to the fish entrepreneurs

So far, 15 students have passed out MFSc in Fish quality Assurance and Management. The list of MFSc courses offered are as follows:

S.N	Course No	Title of the Course	Credit Hours
MAJOR COURSES			
1	FQM 501	Nutritional quality of fish	2 + 1
2	FQM 502	Chemical hazards in fish	2 + 1
3	FQM 503	Microbial hazards in fish	2 + 1
4	FQM 504	Fish Quality indices	1 + 1
5	FQM 505	Processing of Fish and their quality problems	1 + 1
6	FQM 506	Instrumentation in Fish Quality Assessment	2 + 1
7	FQM 507	Food Safety Standards and Auditing systems**	3 + 1
8	FQM 508	Fish Sanitation and Hygiene	1 + 1
9	FQM 509	Molecular and Rapid Techniques in Fish Quality Assurance	2 + 1

6.4.2. FACULTY STRENGTH:

Sl.No.	Name of the Post	Sanctioned strength	Staff in position	No. of Vacancy	Recommendations of V Deans' Committee
1.	Professor	1	1	-	1
2.	Associate Professor	2	-	2	2
3.	Assistant Professor	3	3	-	3

6.4.3.Technical and Supporting staff

S.No.	Name of the post	Sanctioned strength	Staff in position	Vacant position
1.	Laboratory Assistant	2	2	0
2.	Junior Assistant	1	1	0
3.	Lab Attendant	1	1	0
4.	Basic Servant	1	1	0
5.	Sweeper cum Scavenger	1	1	0

6.4.4. Classrooms and Laboratories: The Department of Fish Quality Assurance and Management has one PG class room and 8 laboratories viz., Microbiology lab, Biochemistry lab, Molecular Biology lab and Instrumentation lab I & II, ICP-MS lab, Heat instrument room and cell culture lab . The laboratories are provided with island tables for placing the chemicals, reagents, records, etc with sufficient work space for conducting research work and practical classes.



Microbiology Laboratory



Biochemistry Laboratory

	
Molecular Biology Laboratory	Instrumentation Laboratory I
	
Instrumentation Laboratory II	ICP-MS Laboratory
	
Heat Instrument room	Cell Culture Laboratory

Instruments available in DFQAM

The DFQAM has got state-of-art facilities for analysis of various analyses. The most important and modern instruments available in the different laboratories are LC-MS/MS system (Waters UPLC + ABSciex Mass Analyzer), UPLC system (Waters UPLC), Capillary Gas Chromatograph (Perkin Elmer), GC/MS system (Thermo Fisher), ICP-MS (Thermo Fisher), Semi-automatic Column Chromatograph (GE Health Care), FTIR (Thermo Fisher), UV-Vis Spectrophotometer (Jasco), Spectofluorometer (ELICO), Universal Testing Machine (Lyold), Lyophilizer (Christ), Gas Analyser (Dansensor), Water activity meter (Aqualab), Real time PCR (ABI), Gradient PCR (Eppendorf), Gel

documentation (Alfalaval), Microfuge (Eppendorf), Refrigerated Centrifuge (Hettich, Eppendorf), High Precision Balance (Sartorius), Kelplus apparatus (Pelican), Socplus apparatus (Pelican), Fiberplus apparatus (Pelican), Muffle Furnace, Hot air oven, Freshness tester, Biophotometer (Eppendorf), Water Purification System (Sartorius), Meat homogenizer, Biosafety Cabinet (Clear Air), Vacuum packaging machine, Flake Ice machine, Spray Drier and Gelatin Extraction Vessel.

	
GC-MS	LC-MS/MS
	
UPLC	RT-PCR
	
FTIR	Gel documentation

PG Completed

S.No	Batch	Reg. No of the Student	Name of the Student	Research Topic	Name and designation of the Chair/ Major Advisor
1	2012-2013	MFT12025(FQM)	G. SUMATHI	Authentication of Grouper products using PCR-RFLP technique	**Dr. R. Jeyasekaran** Department of Fish Quality Assurance and Management
2	2012-2013	MFT12023(FQM)	U. MANIMARAN	Selection of suitable quality index for iced and frozen octopus	**Dr. R. Jeya Shakila** Department of Fish Quality Assurance and Management
3	2012-2013	MFT12024(FQM)	B. SIVARAMAN	Characterization of squid protein hydrolysates for antioxidative properties	**Dr. R. Jeya Shakila** Department of Fish Quality Assurance and Management
4	2015-2016	MFT15075(FQM)	T. SURYA	Factors influencing the biogenic amine formation in salt cured fish of Tuticorin	**Dr. R. Jeyasekaran** Director of Research i/c TNJFU
5	2015-2016	MFT15073(FQM)	U. ARISEKAR	Pesticide risk assessment of freshwater fish caught from Thamirabharani river basin	**Dr. R. Jeya Shakila** Department of Fish Quality Assurance and Management
6	2015-2016	MFT15074(FQM)	LIDIYA WILWET	Authentication of shrimp products by PCR-RFLP technique	**Dr. R. Jeyasekaran** Director of Research i/c TNJFU
7	2016-2017	MFT16093(FQM)	S. SUNDHAR	Safety of edible seaweeds of Gulf of Mannar with special reference to pesticides	**Dr. R. Jeya Shakila** Department of Fish Quality Assurance and Management
8	2016-2017	MFT16092(FQM)	DINESH KUMAR	Authentication of processed blue swimming crab meat (*Portunus pelagicus*) using PCR based molecular technique	**Dr. R. Jeyasekaran** Director of Research TNJFU

9	2017-2018	(ID No. U-17-TN-03-002-MF-045)	Mr. Akalesh	Monitoring of farmed shrimps (*Penaeus vannamei*) from Nagapattinam region of Tamil Nadu for *Salmonella* contamination	**Dr. R. Jeyasekaran** Director of Research TNJFU
10	2018-2019	U-18-TN-03-002-M-F- 013	Anil Kewat	Physicochemical and functional characteristics of microencapsulated anti-osteoporotic fish bone collagen peptide.	**Dr. R. Jeya Shakila** Department of Fish Quality Assurance and Management
11	2018-2019	U-18-TN-03-002-M-F- 015	Domendra Dhruve	Investigation on the prevalence of formalin contamination in commercially important fishes of Tamil Nadu	**Dr. R. Shalini** Department of Fish Quality Assurance and Management
12	2018-2019	U-18-TN-03-002-M-F-016	Vanlalhmangaihzuala	Investigation on trans fat accumulation in farmed and wild shrimps	**Dr. R. Jeya Shakila** Department of Fish Quality Assurance and Management
13	2018-2019	U-18-TN-03-002-M-F-017	Ved Prakash Ratrey	Development of PCR based assay for the detection of shrimp allergen tropomyosin in cross-contamination in processed squid and fish	**Dr. R. Jeyasekaran** Director of Research TNJFU

PG ongoing

S. No	Batch	Reg. No of the Student	Name of the Student	Research Topic	Name and designation of the Chair/ Major Advisor
1	2020-21	u-20-tn-03-002-m-f-008	V. Balamanikandan	Safety assessment of freshwater fishes caught from selected inland water bodies of Tamin Nadu for heavy metals and the impact of heat processing method on heavy metal concentration	**Dr. R. Shalini** Department of Fish Quality Assurance and Management

6.4.5 Conduct of Practical and Hands-on-Training: For all the M.F.Sc courses regular practical classes are conducted using the facilities available in the Department as per the course curriculum. In addition field exposure is provided through field visits to Seafood processing plants, landing centers, Office of regulatory authorities like EIA, MPEDA.

6.4.6. Supervision of students in M.F.Sc Programmes:

S.No.	Year	Name of the Faculty	No.of students guided
1	2016-17	Dr.G.Jeyasekaran	2
		Dr.R.Jeya Shakila	1
2	2017-18	Dr.G.Jeyasekaran	1
		Dr.R.Jeya Shakila	1
3	2018-19	Dr.G.Jeyasekaran	1
4	2019-20	-	-
5	2020-21	Dr.G.Jeyasekaran	1
		Dr.R.Jeya Shakila	2
		Dr.R.Shalini	1
Total			10

6.4.7. Feedback of stakeholders (Students, parents, industries, employers, farmers etc.): Feedback obtained from the students at the end of each course work. Feedbacks are also obtained from the trainees from industries and other organization.

6.4.8. Student intake and attrition in the programme for last five years:

Name of the	Actual student admitted in last five years					Attrition (%)				
Degree Programme										
MFSc (FQM)	2016-17	2017-18	2018-19	2019-20	2020-21	2016-17	2017-18	2018-19	2019-20	2020-21
	2	1	5	0	1	50	0	20	0	0

6.4.9. ICT Application in Curricula Delivery: On routine bases courses are taken by PPT in the smart class room. Research students regularly use the ICAR-CERA for accessing the research articles. Online classes are taken in the Google meet platform during the COVID-pandemic.

6.4.10. The information pertaining to 6.4.1 to 6.4.9 shall be provided for each one of UG, PG and PhD Degree Programmes, separately, and to be presented College-wise.

6.4.11. Since the accreditation of Programmes is related to the All India Admission from ICAR and also having weightage for College accreditation, therefore the data presented in the section 6.4 is liable to the verification at any stage.

Certificate

I, the Dean in-charge, **Dr. N.V. Sujathkumar** hereby certify that the information contained in the Section 6.4.1 to 6.4.11 are furnished as per the records available in the college, and degree awarding University.



Signature of the Dean of the college with Date & Seal

TAMIL NADU Dr. J JAYALALITHAA FISHERIES UNIVERSITY

Self Study Report for Doctoral Degree Programme (Ph.D. Fish Quality Assurance and Management)

Submitted by

Fisheries College and Research Institute,
Thoothukudi – 628 008
Tamil Nadu

6.4. Self Study Report for the Ph.D. Programme for the Department of Fish Quality Assurance and Management

6.4.1. Brief History of the Degree Programme: Ph.D., in Fish Quality Assurance and Management is offered by the Department of Fish Quality Assurance and Management at Fisheries College and Research Institute, Thoothukudi. The Ph.D., programme was started in the year 2012. The objectives of the Department are

1. To offer M.F.Sc., and Ph.D., degree programme in Fish Quality Assurance and Management
2. To offer courses pertaining to fish quality and safety to the B.F.Sc. degree students
3. To carry out research projects in the areas of fish quality and safety
4. To guide the PG students in the field of fish quality assurance
5. To impart training to the fish quality control technologists, fish processors, fisher folk, SHGs, etc. on fish quality and safety management programmes
6. To serve as fish quality monitoring and certification centre for testing the quality of fish and fish products and issuing quality certificates to the fish entrepreneurs

So far, 2 students have passed out Ph.D in Fish quality Assurance and Management. The list of Ph.D courses offered are as follows:

1	FQM 601	Pathogenicity of Seafoodborne Pathogens	2 + 1
2	FQM 602	Toxicology of Chemical Residues of Fish	2 + 1
3	FQM 603	Fish Authenticity and Traceability	2 + 1
4	FQM 604	Safety Assessment of Aquacultured Products	2 + 1
5	FQM 605	Enzymes in Fish Quality	2 + 1
6	FQM 606	Nutraceutical Quality of Marine Foods	2 + 1
7	FQM 607	Non-Destructive Instrumental Fish Quality Analysis	2 + 1
8	FQM 608	Safety of Aquaculture Products	2 + 1

6.4.2. Faculty Strength:

S. No.	Name of the post	Sanctioned strength	Faculty in place	Vacant position	Faculty recommended by the ICAR/UGC/VCI/ other regulatory bodies
1.	Professor	1	1	-	1
2.	Associate Professor	2	-	2	2
3.	Assistant Professor	3	3	-	3

6.4.3.Technical and Supporting staff : The position of the technical and supporting staff of the Degree Programme including farm and field workers need to be mentioned for both sanctioned and in- place.

S.No.	Name of the post	Sanctioned strength	Staff in position	Vacant position
1.	Laboratory Assistant	2	2	0
2.	Junior Assistant	1	1	0
3.	Lab Attendant	1	1	0
4.	Basic Servant	1	1	0
5.	Sweeper cum Scavenger	1	1	0

6.4.4. Classrooms and Laboratories: The Department of Fish Quality Assurance and Management has one PG class room and 8 laboratories viz., Microbiology lab, Biochemistry lab, Molecular Biology lab and Instrumentation lab I & II, ICP-MS lab, Heat instrument room and cell culture lab . The laboratories are provided with island tables for placing the chemicals, reagents, records, etc with sufficient work space for conducting research work and practical classes.

	
Microbiology Laboratory	Biochemistry Laboratory
	
Molecular Biology Laboratory	Instrumentation Laboratory I
	
Instrumentation Laboratory II	ICP-MS Laboratory
	
Heat Instrument room	Cell Culture Laboratory

Instruments available in DFQAM

The DFQAM has got state-of-art facilities for analysis of various analyses. The most important and modern instruments available in the different laboratories are LC-MS/MS system (Waters UPLC + ABSciex Mass Analyzer), UPLC system (Waters UPLC), Capillary Gas Chromatograph (Perkin Elmer), GC/MS system (Thermo Fisher), ICP-MS (Thermo Fisher), Semi-automatic Column Chromatograph (GE Health Care), FTIR (Thermo Fisher), UV-Vis Spectrophotometer (Jasco), Spectofluorometer (ELICO), Universal Testing Machine (Lyold), Lyophilizer (Christ), Gas Analyser (Dansensor), Water activity meter (Aqualab), Real time PCR (ABI), Gradient PCR (Eppendorf), Gel documentation (Alfalaval), Microfuge (Eppendorf), Refrigerated Centrifuge (Hettich, Eppendorf), High Precision Balance (Sartorius), Kelplus apparatus (Pelican), Socplus apparatus (Pelican), Fiberplus apparatus (Pelican), Muffle Furnace, Hot air oven, Freshness tester, Biophotometer (Eppendorf), Water Purification System (Sartorius), Meat homogenizer, Biosafety Cabinet (Clear Air), Vacuum packaging machine, Flake Ice machine, Spray Drier and Gelatin Extraction Vessel.

	
GC-MS	LC-MS/MS
	
UPLC	RT-PCR

	
FTIR	Gel documentation

PhD Completed

S.No	Batch	Reg. No of the Student	Name of the Student	Research Topic	Name and designation of the Chair/ Major Advisor
1	2015-2016	DPF14012(FQM)	B. Sivaraman	Authentication of products from snapper using DNA based technique	**Dr. R. Jeyasekaran** Director of Research TNJFU
2	2016-2017	DPF15021(FQM)	R. Shalini	Safety assessment of edible seafood for heavy metal contamination with reference to metal binding protein	**Dr. R. Jeyasekaran** Director of Research TNJFU

PhD Completed

1	2014-15	DPF14013(FQM)	Vikas Kumar	Ultrasound and microwave assisted enzymatic extraction of ACE inhibitory peptides from rohu fish waste	**Dr. R. Jeya Shakila** Department of Fish Quality Assurance and Management
2	2016-17		Neeraj Pathak	Quality of soft shell blue swimming crab subjected to improved pasteurization process	**Dr. R. Jeya Shakila** Department of Fish Quality Assurance and Management

3	2019-20	U-19-TN-03-002-D-F-006	U. Arisekar	Safety assessment of chemical contaminants in farmed shrimp, Penaeus vannamei along the SE coast Peninsular India	**Dr. R. Jeya Shakila** Department of Fish Quality Assurance and Management
4	2019-20	U-17-TN-03-002-D-F-004	T. Surya	Investigation on the factors affecting the biofilm forming Salmonella associated with seafood contact surfaces and their control	**Dr. R. Jeyasekaran** Director of Research TNJFU
6	2020-2021	U-20-TN-03-002-D-F-008	S. Sundhar	Safety evaluation and risk assessment of edible seaweeds available along the Gulf of Mannar for micropollutants	**Dr. R. Jeya Shakila** Department of Fish Quality Assurance and Management

6.4.5 Conduct of Practical and Hands-on-Training: For all the Ph.D., courses regular practical classes are conducted using the facilities available in the Department as per the course curriculum. In addition field exposure is provided through field visits to Seafood processing plants, landing centers, Office of regulatory authorities like EIA, MPEDA.

6.4.6. Supervision of students in Ph.D. Programmes:

S.No.	Year	Name of the Faculty	No.of students guided
1	2014-18	Dr.G.Jeyasekaran	1
2	2014-21	Dr.R.Jeya Shakila	1
3	2015-20	Dr.G.Jeyasekaran	1
4	2016-21	Dr.R.Jeya Shakila	1
5	2019-22	Dr.G.Jeyasekaran	1
		Dr.R.Jeya Shakila	1
5	2020-23	Dr.R.Jeya Shakila	1
Total			7

Research projects :

Sl. No.	**Title of the project**	**Funding Agency**	**Budget (in lakhs)**	**Principal Investigator**
1	Bioactive peptides from fish protein hydrolysates produced using endogenous proteinases from fish processing wastes	DST, GOI	Rs. 33.08	Dr. R. Jeya Shakila
2	Niche area of excellence in Fish Safety and Quality Assurance	ICAR	Rs. 305.60	Dr. G. Jeyasekaran
3	Bio-prospecting for anti-osteoporotic collagen peptides derived from fish bones	DBT, GOI	Rs. 36. 07	Dr. R. Jeya Shakila
4	Monitoring of heavy metals in fish and shellfish species along the Indian coast and possible mitigation measures	FSSAI	Rs. 9.52	Dr. R. Shalini

Self finance scheme :

S.No.	**Title of the project**	**Principal Investigator**
1	Quality analysis of Fish samples	Dr. R. Jeyasekaran Dr. R. Jeya Shakila

6.4.7. Feedback of stakeholders (Students, parents, industries, employers, farmers etc.): Feedback obtained from the students at the end of each course work. Feedbacks are also obtained from the trainees fro industries and other organization.

6.4.8. Student intake and attrition in the programme for last five years:

Name of the Degree Programme	Actual student admitted in last five years					Attrition (%)				
Ph.D(FQM)	2016-17	2017-18	2018-19	2019-20	2020-21	2016-17	2017-18	2018-19	2019-20	2020-21
	1	1	0	2	1	0	100	0	0	0

6.4.9. ICT Application in Curricula Delivery: On routine bases courses are taken by PPT in the smart class room. Research students regularly use the ICAR-CERA for accessing the research articles. Online classes are taken in the Google meet platform during the COVID-pandemic.

6.4.10. The information pertaining to 6.4.1 to 6.4.9 shall be provided for each one of UG, PG and PhD Degree Programmes, separately, and to be presented College-wise.

6.4.11. Since the accreditation of Programmes is related to the All India Admission from ICAR and also having weightage for College accreditation, therefore the data presented in the section 6.4 is liable to the verification at any stage.

Certificate

I, the Dean in-charge, **Dr. N.V. Sujathkumar** hereby certify that the information contained in the Section 6.4.1 to 6.4.11 are furnished as per the records available in the college, and degree awarding University.



Signature of the Dean of the college with Date & Seal

TAMIL NADU Dr. J JAYALALITHAA FISHERIES UNIVERSITY

Self Study Report for Post Graduate Degree Programme (M.F.Sc. in Fish Economics)

Submitted by

Fisheries College and Research Institute,
Thoothukudi – 628 008
Tamil Nadu

6.4. SELF STUDY REPORT FOR THEPOST GRADUATE DEGREE PROGRAMME - M.F.Sc. IN FISHERIES ECONOMICS

6.4.1. BRIEF HISTORY OF THE M.F.SC IN FISHERIES ECONOMICS DEGREE PROGRAMME:

The Department of Fisheries Economics was established during 1978 to offer courses on fisheries economics and extension for undergraduate and postgraduate degree programmes besides conducting research and extension activities. The Department of Fisheries Extension was established during September 1989 to offer undergraduate and postgraduate degree programmes (from 2002 onwards) in fisheries extension besides research and organising various extension activities to enhance the livelihood of fishers. As per the ICAR nomenclature, all the three departments have been merged and renamed as Department of Fisheries Extension, Economics and Statistics during December 2017. So far, 22 M.F.Sc. students in Fisheries Extension and 24 M.F.Sc., students in Fisheries Economics were passed out. . The list of courses dealt in the degree programme is given below:

M.F.Sc. (Fisheries Economics)

Sl.No	Course No	Title of the Course	Credit Hours
1	FEC 501	Microeconomics	2+0
2	FEC 502	Macroeconomics	2+0
3	FEC 503	Aquaculture Production Economics	2+1
4	FEC 504	Marine Fisheries Resource Economics	1+1
5	FEC 505	Fisheries Marketing Management	2+1
6	FEC 506	Environmental Economics	2+0
7	FEC 507	Economics of Fisheries Development Policy and Planning	2+0
8	FEC 508	Fisheries Finance and Cooperation	1+1
9	FEC 509	Introduction to Econometrics	1+1
10	FEC 510	Project Formulation and Management	1+1
11	FEC 511	International Economics and Trade	1+1

M.F.Sc. (Common courses)

Sl.No	Course No	Title of the Course	Credit Hours
1	PGS 501	Library and Information Services	0+1
2	PGS 502	Technical Writing and Communication Skills	0+1
3	PGS 503	Intellectual Property Rights and its Management in Agriculture	1+0
4	PGS 505	Agricultural Research Ethics and Rural Development Programmes	1+0
5	PGS 506	Disaster Management (e-course)	1+0
6	RMC 501	Research Methodology	1+1
7	FST 513	Applied Fisheries Statistics	2+1

6.4.2. FACULTY STRENGTH:

The faculty strength of the Department of Fisheries Extension, Economics and statistics is shown in the below table:

Sl.No.	Name of the Post	Sanctioned strength	Staff in position	No. of Vacancy	Recommendations of V Deans' Committee
1.	Professor	1	1	0	1
2.	Associate Professor	2	1	1	3
3.	Assistant Professor	7	4	3	5
	Total	**10**	**6**	**4**	**9**

6.4.3. TECHNICAL AND SUPPORTING STAFF:

No.	**Name of the post**	**Sanctioned strength**	**In-position**	**Vacancy**
1	Assistant (Non-Sec)	1	--	1
2	Electrician Grade II	1	1 (Engaged in the Electrical Section)	--
3	Data Entry Operator	1	1** (engaged in Dean's office since 11.05.2015)	--
4	Time scale Mazdoor	1	1	--

6.4.4. CLASSROOMS AND LABORATORIES:

FACILITIES:

- Audio Visual Lab
- Practical Class





Equipment:

Public Address System

LCD projector

Current focus of research and future thrust areas

i. Technology adoption studies
ii. Impact Assessment of training programme
iii. Training needs of fisherfolk
iv. Entrepreneurship Development
v. Assessment of Knowledge level
vi. Market Led Extension

vii. ITK in fisheries

viii. Communication and information technology

ix. Information Management Behaviour of fishermen

x. Value Chain Analysis

xi. Vulnerability analysis

xii. Economic Analysis of fisheries technology

xiii. Price forecasting in fisheries

6.4.5 Conduct of Practical and Hands-on-Training

The department has a full-fledged facility for the conduct of practical classes on various aspects related to fisheries economics

6.4.6. SUPERVISION OF STUDENTS IN PG PROGRAMMES:

During the course work, PG students' academic progress is being monitored by PG batch coordinator in the rank of Professor & Head. In the second year (Research), progress of student's research is being monitored by the advisory committee comprising of Chairman and two advisors.

S.No	Batch	Reg. No of the Student	Name of the Student	Research Topic	Name and designation of the Chair/ Major Advisor
1.	2015-2016	MFT 15078 (FEC)	Vignesh, K	Indian Major Carps Seed Production and Rearing in Thanjavur District and Economic Analysis	**Dr. V. Senthilkumar** Assistant Professor Thanjavur Centre for Sustainable Aquaculture, Soorakkotai, Thanjavur
2.	2015-2016	MFT 15076 (FEC)	Pasupathi, P	A comparative Economic analysis of Extensive and Semi Intensive Farming of Genetically improved Farmed Tilapia (GIFT) in Tamil Nadu	**Dr. M. Rajakumar** DEE TNJFU, Nagapattinam

3.	2015-2016	MFT 15077 (FEC)	P. RAJARAJAN	An Economic Analysis of *Litopenaeus Vannamei* Shrimp farming in Nagapattinam District Tamil Nadu	**Dr. R. Senthiladeban**
4	2016-2017	MFT 16094 (FEC)	S. SANTHOSH,	Fish Marketing System in Coimbatore city, Tamil Nadu	**Dr. M. Rajakumar** DEE TNJFU, Nagapattinam
5	2017-2018	I-17-TN-03-002-M-F-050	GOPIKA	Socio-Economic Empowerment status of women through fisheries post-harvest activities in Thoothukudi, Tamil Nadu	**Dr. M. Rajakumar** DEE TNJFU, Nagapattinam
6	2018-2019	U-18-TN-03-002-M-F-024	SONANLA, N.K.	A Critical Analysis of Economic and Marketing Efficiency of Freshwater Fish Culture in Manipur	**Dr. T. Umamaheswari** Assistant Professor DFEES, FC & RI, Thoothukudi

6.4.7. FEEDBACK OF STAKEHOLDERS (STUDENTS, PARENTS, INDUSTRIES, EMPLOYERS, FARMERS ETC.):

The academic sessions of the college are being assessed with feedback from the Students regarding teaching through questionnaires and student counseling by PG coordinator and advisory committee.

6.4.8. STUDENT INTAKE AND ATTRITION IN THE PROGRAMME FOR LAST FIVE YEARS:

Name of the Degree Programme	Actual student admitted in last five years					Attrition (%)				
M.F.Sc. (Fish. Eco.)	2016-17	2017-18	2018-19	2019-20	2020-21	2016-17	2017-18	2018-19	2019-20	2020-21
	1	1	1	0	1	0	0	0	0	0

6.4.9. ICT APPLICATION IN CURRICULA DELIVERY:

Teaching through ICT tools is being followed for effective teaching by making useof the wi-fi campus facility and classroom environment. PG/Ph.D. students' advisory committee sometimes comprises of faculty from other constituent units (working outside the student's institute) of the University. Therefore, there is monthly video conferencing research credits of PG/Ph.D. programmes through online video conference mode.

Certificate

I, the Dean in-charge, **Dr. N.V.Sujathkumar** hereby certify that the information contained in the Section 6.4.1to 6.4.9 are furnished as per the records available in the college, and degree awarding university.



Signature of the Dean of the College with Date & Seal

TAMIL NADU Dr. J JAYALALITHAA FISHERIES UNIVERSITY

Self Study Report for Doctoral Degree Programme (Ph.D. in Fisheries Economics)

Submitted by

Fisheries College and Research Institute,
Thoothukudi – 628 008
Tamil Nadu

6.4. SELF STUDY REPORT FOR THE DOCTOR OF PHILOSOPHY DEGREE PROGRAMME - Ph.D IN FISHERIES ECONOMICS

6.4.1. BRIEF HISTORY OF THE FISHERIES FISHERIES ECONOMICS DEGREE PROGRAMME:

Doctor of Philosophy (Ph.D) in Fisheries Economics is offered by the Department of Fisheries Extension, Economics and statistics at Fisheries College and Research Institute, Thoothukudi and the programme is offered following ICAR guidelines for the PG programme. The list of courses dealt in the degree programme is given below:

Ph.D. (Fisheries Economics)

Sl.No	Course No	Title of the Course	Credit Hours
1	FEC 601	Advanced Economic Analysis	2+0
2	FEC 602	Fisheries Marketing and Price Analysis	2+1
3	FEC 603	Advanced Econometrics	2+1
4	FEC 604	Fisheries Planning and Policies	2+0
5	FEC 605	Aquaculture Production Economics	2+1
6	FEC 606	Marine Resource Economics	1+1
7	FEC 607	Managerial Economics	1+1
8	FEC 608	Advanced International Economics and Trade	1+1
9	FEC 609	Fisheries Governance and Socio Economics	1+1

Common courses

Sl.No	Course No	Title of the Course	Credit Hours
1	PGS 601	Library and Information Services	0+1
2	PGS 602	Technical Writing and Communication Skills	0+1
3	PGS 603	Intellectual Property Rights and its Management in Agriculture	1+0
4	PGS 605	Agricultural Research Ethics and Rural Development Programmes	1+0
5	PGS 606	Disaster Management (e-course)	1+0
6	RMC 601	Research Methodology	1+1
7	FST 601	Advanced Statistical Methods	2+1
8	FST 602	Software for Fisheries Data Analysis and Management	0+2

6.4.2. FACULTY STRENGTH:

The faculty strength of the Department of Fisheries Extension, Economics and statistics is shown in the below table:

Sl.No.	Name of the Post	Sanctioned strength	Staff in position	No. of Vacancy	Recommendations of V Deans' Committee
1.	Professor	1	1	0	1
2.	Associate Professor	2	1	1	3
3.	Assistant Professor	7	4	3	5
	Total	**10**	**6**	**4**	**9**

6.4.3. TECHNICAL AND SUPPORTING STAFF:

No.	Name of the post	Sanctioned strength	In-position	Vacancy
1	Assistant (Non-Sec)	1	--	1
2	Electrician Grade II	1	1 (Engaged in the Electrical Section)	--
3	Data Entry Operator	1	1** (engaged in Dean's office since 11.05.2015)	--
4	Time scale Mazdoor	1	1	--

6.4.4. CLASSROOMS AND LABORATORIES:

FACILITIES:

- Audio Visual Lab
- Practical Class

Equipment:
Public Address System
LCD projector

Current focus of research and future thrust areas

i. Technology adoption studies
ii. Impact Assessment of training programme
iii. Training needs of fisherfolk
iv. Entrepreneurship Development
v. Assessment of Knowledge level
vi. Market Led Extension
vii. ITK in fisheries
viii. Communication and information technology
ix. Information Management Behaviour of fishermen
x. Value Chain Analysis
xi. Vulnerability analysis
xii. Economic Analysis of fisheries technology
xiii. Price forecasting in fisheries

6.4.5 Conduct of Practical and Hands-on-Training

The department has a full-fledged facility for the conduct of practical classes on various aspects related to fisheries extension

6.4.6. SUPERVISION OF STUDENTS IN PG PROGRAMMES:

During the course work, PG students' academic progress is being monitored by PG batch coordinator in the rank of Professor & Head. In the second year (Research), progress of student's research is being monitored by the advisory committee comprising of Chairman and two advisors.

PhD Completed – FISHERIES ECONOMICS

S.No	Batch	Reg. No of the Student	Name of the Student	Research Topic	Name and designation of the Chair/ Major Advisor
1.	2015-2016	DPF 15023 (FEC)	KANAGA, V	Socio Economic dimensions of marine fishery resources degradation on the livelihood status of	**Dr. M. Rajakumar** DEE TNJFU, Nagapattinam
2.	2015-2016	DPF 15024 (FEC)	UMA MAHESWARI, T	Value Chain Analysis of Farmed Shrimp (*Penaeus vannamei)* In Tamil Nadu	**Dr. M. Rajakumar** DEE TNJFU, Nagapattinam

PhD ongoing – FISHERIES ECONOMICS

S.No	Batch	Reg. No of the Student	Name of the Student	Research Topic	Name and designation of the Chair/ Major Advisor
1	2018-2019	U-18-TN-03-002-D-F-008	THRIVENI KASUKURTHI (Thesis submitted)	An Economic Analysis Production Systems in Nellore District, Andhra Pradesh	**Dr. R. Jayaraman** Programme Co-ordinator
2	2019-2020	U-18-TN-03-002-D-F-003	GREEN SEA K	Economic Evaluation of Marine Ecosystems Towards Sustainable Blue Economy in Gulf of Mannar Tamil Nadu	**Dr. M. Rajakumar** DEE TNJFU, Nagapattinam

3.	2020-2021	U-20-TN-03-002-D-F-003	RADHAKRISHNAN, K.	Ecological economics approach to shrimp (Penaeus vannamei) aquacyulture profitability and sustainability in Tamil Nadu	**Dr. R. Jayaraman** Programme Co-ordinator
4.	2020-2021	U-18-TN-03-002-M-F-025	SONANLA, N.K.	Development of Strategies Towards Consumer Focused Marketing of Fish and Fishery Products in Manipur	**Dr. M. Rajakumar** DEE TNJFU, Nagapattinam

6.4.7. FEEDBACK OF STAKEHOLDERS (STUDENTS, PARENTS, INDUSTRIES, EMPLOYERS, FARMERS ETC.):

The academic sessions of the college are being assessed with feedback from the Students regarding teaching through questionnaires and student counseling by PG coordinator and advisory committee.

6.4.8. STUDENT INTAKE AND ATTRITION IN THE PROGRAMME FOR LAST FIVE YEARS:

Name of the Degree Programme	Actual student admitted in last five years					Attrition (%)				
Ph.D. (Fish. Eco.)	2016-17	2017-18	2018-19	2019-20	2020-21	2016-17	2017-18	2018-19	2019-20	2020-21
	0	0	1	1	2	0	0	0	0	50

6.4.9. ICT APPLICATION IN CURRICULA DELIVERY:

Teaching through ICT tools is being followed for effective teaching by making useof the wi-fi campus facility and classroom environment. PG/Ph.D. students' advisory committee sometimes comprises of faculty from other constituent units (working outside the student's institute) of the University. Therefore, there is monthly video conferencing research credits of PG/Ph.D. programmes through online video conference mode.

Certificate

I, the Dean in-charge, **Dr. N.V.Sujathkumar** hereby certify that the information contained in the Section 6.4.1to 6.4.9 are furnished as per the records available in the college, and degree awarding university.



Signature of the Dean of the College with Date & Seal

TAMIL NADU Dr. J JAYALALITHAA FISHERIES UNIVERSITY

Self Study Report for Post Graduate Degree Programme (M.F.Sc. in Fish Extension)

Submitted by

Fisheries College and Research Institute,
Thoothukudi – 628 008
Tamil Nadu

6.4. SELF STUDY REPORT FOR THEPOST GRADUATE DEGREE

PROGRAMME - M.F.Sc. IN FISHERIES EXTENSION

6.4.1. BRIEF HISTORY OF THE M.F.SC IN FISHERIES EXTENSION DEGREE PROGRAMME:

The Department of Fisheries Economics was established during 1978 to offer courses on fisheries economics and extension for undergraduate and postgraduate degree programmes besides conducting research and extension activities. The Department of Fisheries Extension was established during September 1989 to offer undergraduate and postgraduate degree programmes(from 2002 onwards) in fisheries extension besides research and organising various extension activities to enhance the livelihood of fishers. As per the ICAR nomenclature, all the three departments have been merged and renamed as Department of Fisheries Extension, Economics and Statistics during December 2017. So far, 22 M.F.Sc. students in Fisheries Extension and 24 M.F.Sc., students in Fisheries Economics were passed out. . The list of courses dealt in the degree programme is given below:

Sl.No	Course No	Title of the Course	Credit Hours
1	FEX 501	Perspectives and Prospects of Fisheries Extension	1+1
2	FEX 502	Extension Communication and Methods	2+1
3	FEX 503	Participatory Approaches in Extension Education	2+1
4	FEX 504	Training for Human Resource Development	2+1
5	FEX 505	Gender Livelihood and Development	1+1
6	FEX 506	Diffusion and adoption of innovations in Fisheries	1+1
7	FEX 509	Human Resource Management	1+1
8	FEX 513	Methods and Designing of Social Research	2+1
9	FEX 511	Development Journalism	

Common courses:

Sl.No	Course No	Title of the Course	Credit Hours
1	PGS 501	Library and Information Services	0+1
2	PGS 502	Technical Writing and Communication Skills	0+1
3	PGS 503	Intellectual Property Rights and its Management in Agriculture	1+0
4	PGS 505	Agricultural Research Ethics and Rural Development Programmes	1+0
5	PGS 506	Disaster Management (e-course)	1+0
6	RMC 501	Research Methodology	1+1
7	FST 513	Applied Fisheries Statistics	2+1

6.4.2. FACULTY STRENGTH:

The faculty strength of the Department of Fisheries Extension, Economics and statistics is shown in the below table:

Sl.No.	Name of the Post	Sanctioned strength	Staff in position	No. of Vacancy	Recommendations of V Deans' Committee
1.	Professor	1	1	0	1
2.	Associate Professor	2	1	1	3
3.	Assistant Professor	7	4	3	5
	Total	**10**	**6**	**4**	**9**

6.4.3. TECHNICAL AND SUPPORTING STAFF:

No.	**Name of the post**	**Sanctioned strength**	**In-position**	**Vacancy**
1	Assistant (Non-Sec)	1	--	1
2	Electrician Grade II	1	1 (Engaged in the Electrical Section)	--
3	Data Entry Operator	1	1** (engaged in Dean's office since 11.05.2015)	--
4	Time scale Mazdoor	1	1	--

6.4.4. CLASSROOMS AND LABORATORIES:

FACILITIES:

- Audio Visual Lab
- Practical Class





Equipment:
Public Address System
LCD projector

Current focus of research and future thrust areas

i. Technology adoption studies
ii. Impact Assessment of training programme
iii. Training needs of fisherfolk
iv. Entrepreneurship Development
v. Assessment of Knowledge level
vi. Market Led Extension
vii. ITK in fisheries

viii. Communication and information technology

ix. Information Management Behaviour of fishermen

x. Value Chain Analysis

xi. Vulnerability analysis

xii. Economic Analysis of fisheries technology

xiii. Price forecasting in fisheries

6.4.5 Conduct of Practical and Hands-on-Training

The department has a full-fledged facility for the conduct of practical classes on various aspects related to fisheries extension

6.4.6. SUPERVISION OF STUDENTS IN PG PROGRAMMES:

During the course work, PG students' academic progress is being monitored by PG batch coordinator in the rank of Professor & Head. In the second year (Research), progress of student's research is being monitored by the advisory committee comprising of Chairman and two advisors. The details of PG students since the inception of the programme in the Department is given below:

Sl. No.	Name of the Student	Year of Completion	Current Status
1	Dr. G.Arul Oli	2002	Assistant Professor (Extension), TNJFU, Thoothukudi
2	Mr. K. Karumalai kannan	2004	Regional Manager, SBI
3	Mr. K.Arivukkarasu	2004	Asst. Director, MPEDA, Kochi
4	Mr. Ali Hassan	2005	Asst. Director (Fish), Dept. of Fisheries, Manipur
5	Mr.Y. Essakias	2006	Manger, Liberty Fish Processing, Thoothukudi
6	Mr. S. Senthilkumar	2007	Manager, SBI
7	Mr. I. Sivaraman	2009	Scientist, CIBA
8	Mr. Jaki Singh	2010	Asst. Prof., Fisheries College, Tripura
9	Mrs. Deepthi Ande	2011	Asst. Prof. (Extension), College of Fisheries, Nellore
10	Mrs. M. Mani Megalai	2014	Asst. Manager, Processing Factory
11	Mr. Aswini Singh	2014	Asst. Manager, Feed Company, West Bengal

12	Miss. A.Mahalakshmi	2015	Asst. Manger, Fish Processing Industry
13	Mr. N. Nithya	2015	Asst. Manger, Processing Industry, Chennai
14	Mr. Balaji Gloguloath	2015	SMS, KVA, Andhra Pradesh
15	Miss. Harsha Elisabath	2015	Ph.D. Scholar (Extension), Canada
16	Miss. S. Sathoorna	2016	Asst. Manager, Bank of Baroda, Kerala
17	Mr. K. Arunprasath	2016	Asst. Manager, Aqua Industry, Kenya
18	Mr. V. Vigneswaran	2016	Manager, Shrimp Feed Company, Nagai, Tamil Nadu
19	Miss. Sai Susmintha Bhargavi	2018	Principal, Fisheries Polytechnic and Vocational Degree College, Pydah Educational Institution, Kakinada, East Godavari, Andhra Pradesh

PG Completed
FISHERIES EXTENSION

S.No	Batch	Reg. No of the Student	Name of the Student	Research Topic	Name and designation of the Chair/ Major Advisor
1.	2014-2015	MFT 14041 (FEX)	Harsha Elizabeth James	Impact of women empowerment programmes on the livelihood status of fisherwomen	**Dr. K. Veerabhadran** Professor and Head KKGSeCA, Kanyakumari
2.	2015-2016	MFT 15064 (FEX)	Arunprasath, K	Adoption Behavior of Vannamei Farming Among the Farmers of Nagapattinam District	**Dr. K. Veerabhadran** Professor and Head KKGSeCA, Kanyakumari
3.	2015-2016	MFT 15065 (FEX)	R.D. Chathurna	Women Entrepreneurship in Fish Trade	**Dr. R. Santhakumar** Professor and Head DFEES, FC & RI, Thoothukudi
4.	2015-2016	MFT 16066 (FEX)	Vigneshwaran, P	An Empirical Study of Longline fishing in Kanyakumari District of Tamil nadu	**Dr.K.Ravaneshwaran,** Professor,

5.	2017-2018	I-17-TN-03-002-M-F-051	SAI SUSMITHA BHARGAVI, K	Fishers' perception of climate change on fisheries in the southern coastal districts of Tamil Nadu	**Dr. N.V. Sujathkumar** Dean i/c FC & RI, Thoothukudi
6.	2018-2019	U-18-TN-03-002-M-F-022	T. IYYAPPAN	A critical analysis of factors influencing the managerial efficiency of shrimp farmers at Nagapattinam District	**Dr. R. Santhakumar** Professor and Head DFEES, FC & RI, Thoothukudi
7.	2018-2019	U-18-TN-03-002-M-F-023	SHETTY SHIVA SHANKAR	An analysis o the utilization pattern of reservoir cage farming in Khammam district of Telangana state	**Dr. K. Veerabhadran** Professor and Head KKGCesa, Kanyakumari
8.	2018-2019	U-18-TN-03-002-M-F-024	VISHAKA GURUNG	Extension services for augmenting the adoption of aquaculture technologies: A study on the livelihood opportunities of the fish farmers in the northern region of West Bengal	**Dr. N.V. Sujathkumar** Dean i/c FC & RI, Thoothukudi

PG ongoing
FISHERIES EXTENSION

S.No	Batch	Reg. No of the Student	Name of the Student	Research Topic	Name and designation of the Chair/ Major Advisor
1.	2020-2021	I-20-TN-03-002-M-F-012	ARNI SANCHI G MOMIN	Research proposal not received	**Dr. G. Arul Oli** Assistant Professor DFEES, FC & RI, Thoothukudi

6.4.7. FEEDBACK OF STAKEHOLDERS (STUDENTS, PARENTS, INDUSTRIES, EMPLOYERS, FARMERS ETC.):

The academic sessions of the college are being assessed with feedback from the Students regarding teaching through questionnaires and student counseling by PG coordinator and advisory committee.

6.4.8. STUDENT INTAKE AND ATTRITION IN THE PROGRAMME FOR LAST FIVE YEARS:

Name of the Degree Programme	Actual student admitted in last five years					Attrition (%)				
M.F.Sc.. (Fish. Extn.)	2016-17	2017-18	2018-19	2019-20	2020-21	2016-17	2017-18	2018-19	2019-20	2020-21
	2	1	2	1	2	0	0	0	0	0

6.4.9. ICT APPLICATION IN CURRICULA DELIVERY:

Teaching through ICT tools is being followed for effective teaching by making useof the wi-fi campus facility and classroom environment. PG/Ph.D. students' advisory committee sometimes comprises of faculty from other constituent units (working outside the student's institute) of the University. Therefore, there is a monthly video conferencing research credits of PG/Ph.D. programmes through online video conference mode.

Certificate

I, the Dean in-charge, **Dr. N.V.Sujathkumar** hereby certify that the information contained in the Section 6.4.1to 6.4.9 are furnished as per the records available in the college, and degree awarding university.



Signature of the Dean of the College with Date & Seal

TAMIL NADU Dr. J JAYALALITHAA FISHERIES UNIVERSITY

Self Study Report for Doctoral Degree Programme (Ph.D. in Fisheries Extension)

Submitted by

Fisheries College and Research Institute,
Thoothukudi – 628 008
Tamil Nadu

6.4. SELF STUDY REPORT FOR THE DOCTOR OF PHILOSOPHY DEGREE PROGRAMME - Ph.D IN FISHERIES EXTENSION

6.4.1. BRIEF HISTORY OF THE FISHERIES EXTENSION DEGREE PROGRAMME:

Doctor of Philosophy (Ph.D) in Fisheries Extension is offered by the Department of Fisheries Extension, Economics and statistics at Fisheries College and Research Institute, Thoothukudi since 2015 and the programme is offered following ICAR guidelines for the PG programme. The list of courses dealt in the degree programme is given below:

Major

Sl.No	Course No	Title of the Course	Credit Hours
1	FEX 601	Advances in fisheries extension management	2+1
2	FEX 602	Monitoring and evaluation of development programmes	2+1
3	FEX 603	Measurement and scaling techniques in fisheries extension	2+1
4	FEX 604	Extension service system management	1+1
5	FEX 605	Advances in training methods and education technology	1+1
6	FEX 606	Social and gender issues in fisheries	1+1
7	FEX 607	Information and communication technology for fisheries development	1+1
8	FEX 608	International experiences in fisheries extension	2+0
9	FEX 609	Entrepreneurship development	1+1

Common courses

Sl.No	Course No	Title of the Course	Credit Hours
1	PGS 601	Library and Information Services	0+1
2	PGS 602	Technical Writing and Communication Skills	0+1
3	PGS 603	Intellectual Property Rights and its Management in Agriculture	1+0
4	PGS 605	Agricultural Research Ethics and Rural Development Programmes	1+0
5	PGS 606	Disaster Management (e-course)	1+0
6	RMC 601	Research Methodology	1+1
7	FST 601	Advanced Statistical Methods	2+1
8	FST 602	Software for Fisheries Data Analysis and Management	0+2

6.4.2. FACULTY STRENGTH:

The faculty strength of the Department of Fisheries Extension, Economics and statistics is shown in the below table:

Sl.No.	Name of the Post	Sanctioned strength	Staff in position	No. of Vacancy	Recommendations of V Deans' Committee
1.	Professor	1	1	0	1
2.	Associate Professor	2	1	1	3

3.	Assistant Professor	7	4	3	5
	Total	**10**	**6**	**4**	**9**

6.4.3. TECHNICAL AND SUPPORTING STAFF:

No.	Name of the post	Sanctioned strength	In-position	Vacancy
1	Assistant (Non-Sec)	1	--	1
2	Electrician Grade II	1	1 (Engaged in the Electrical Section)	--
3	Data Entry Operator	1	1** (engaged in Dean's office since 11.05.2015)	--
4	Time scale Mazdoor	1	1	--

6.4.4. CLASSROOMS AND LABORATORIES:

FACILITIES:

- Audio Visual Lab
- Practical Class

Equipment:

Public Address System
LCD projector

Current focus of research and future thrust areas

i. Technology adoption studies
ii. Impact Assessment of training programme
iii. Training needs of fisherfolk
iv. Entrepreneurship Development
v. Assessment of Knowledge level
vi. Market Led Extension
vii. ITK in fisheries
viii. Communication and information technology
ix. Information Management Behaviour of fishermen
x. Value Chain Analysis
xi. Vulnerability analysis
xii. Economic Analysis of fisheries technology
xiii. Price forecasting in fisheries

6.4.5 Conduct of Practical and Hands-on-Training

The department has a full-fledged facility for the conduct of practical classes on various aspects related to fisheries extension.

6.4.6. SUPERVISION OF STUDENTS IN PG PROGRAMMES:

During the course work, PG students' academic progress is being monitored by PG batch coordinator in the rank of Professor & Head. In the second year (Research), progress of student's research is being monitored by the advisory committee comprising of Chairman and two advisors.

PhD Completed – FISHERIES EXTENSION

S.No	Batch	Reg. No of the Student	Name of the Student	Research Topic	Name and designation of the Chair/ Major Advisor
1.	2014-2015	DPF 14009 (FEX)	G. ARUL OLI	Information management behaviour of fishermen in relation to communication technologies	**Dr. R. Santhakumar** Professor and Head Dept. FEES, FC & RI, Thoothukudi

PhD ongoing – FISHERIES EXTENSION

S.No	Batch	Reg. No of the Student	Name of the Student	Research Topic	Name and designation of the Chair/ Major Advisor
1.	2015-2016	DPF 15018	JEEVITHA, C (**Thesis submitted)**	Developing Fishermen Friendly Interactive Multimedia Compact Disc (IMCD) and testing its effectiveness among Fishermen of Coastal Tamilnadu	**Dr. K. Veerabhadran** Professor and Head KKGCesa, Kanyakumari
2	2019-2020	U-19-TN-03-002-D-F-005	DEEPTHI ANDE	A critical analysis on the Attitude of shrimp farmers towards private extension services in Andhra Pradesh	**Dr. N.V. Sujathkumar** Dean i/c FC & RI, Thoothukudi
3.	2020-202 1	U-18-TN-03-002-M-F-022	IYYAPPAN, T	Achievement motivation and attitude of ornamental fish entrepreneurs towards market-led extension in Tamil Nadu	**Dr. R. Santhakumar** Professor and Head DFEES, FC & RI, Thoothukudi

4.	2020-2021	U-18-TN-03-002-M-F-024	VISHAKA GURUNG	Proposal not received	**Dr. N.V. Sujathkumar** Dean i/c FC & RI, Thoothukudi

6.4.7. FEEDBACK OF STAKEHOLDERS (STUDENTS, PARENTS, INDUSTRIES, EMPLOYERS, FARMERS ETC.):

The academic sessions of the college are being assessed with feedback from the Students regarding teaching through questionnaires and student counseling by PG coordinator and advisory committee.

6.4.8. STUDENT INTAKE AND ATTRITION IN THE PROGRAMME FOR LAST FIVE YEARS:

Name of the Degree Programme	Actual student admitted in last five years					Attrition (%)				
Ph.D. (Fish. Extn.)	2016-17	2017-18	2018-19	2019-20	2020-21	2016-17	2017-18	2018-19	2019-20	2020-21
	0	0	0	1	2	0	0	0	0	0

6.4.9. ICT APPLICATION IN CURRICULA DELIVERY:

Teaching through ICT tools is being followed for effective teaching by making useof the wi-fi campus facility and classroom environment. PG/Ph.D. students' advisory committee sometimes comprises of faculty from other constituent units (working outside the student's institute) of the University. Therefore, there is monthly video conferencing research credits of PG/Ph.D. programmes through online video conference mode.

Certificate

I, the Dean in-charge, **Dr. N.V.Sujathkumar** hereby certify that the information contained in the Section 6.4.1to 6.4.9 are furnished as per the records available in the college, and degree awarding university.



Signature of the Dean of the College with Date & Seal