

COURSES OFFERED UNDER DIFFERENT DEGREE PROGRAMMES
(as per recommendations of the IVth Deans Committee of ICAR)

Undergraduate Level (B.F.Sc.)

Sl. No.	Course No.	Title of Course	Credit hours
I	Basic Supporting Course		19(11+8)
1	BPM-104	Information & Communication Technology	2(1-0-1x2)
2	BPS-221	Fisheries Biostatistics	2(1-0-1x2)
3	BPS-270	Basic Statistical Methods	2(1-0-1x2)
4	AEC-345	Fisheries Economics	3(2-0-1x2)
5	AEC-348	Financing and Marketing Management in Fisheries	2(1-0-1x2)
6	MAM/AAC-351	Entrepreneurship Development and Communication Skills	2(1-0-1x2)
7	BBC-360	Elementary Biochemistry	4(3-0-1x2)
8	BBC-370	Biochemical Techniques and Instrumentation	2(1-0-1x2)
II	Aquaculture		32(18+14)
1	FAC-111	Principles of Aquaculture	2(1-0-1x2)
2	FAC-121	Freshwater Aquaculture	3(2-0-1x2)
3	FAC-211	Aquaculture Engineering	3(2-0-1x2)
4	FAC-212	Finfish Breeding and Hatchery Management	2(1-0-1x2)
5	FAC-213	Shellfish Breeding and Hatchery Management	2(1-0-1x2)
6	FAC-221	Ornamental Fish Production and Management	2(1-0-1x2)
7	FAC-222	Mass Production of Fish Food Organisms	2(1-0-1x2)
8	FAC-311	Fish Genetics and Breeding	2(1-0-1x2)
9	FAC-312	Fish Nutrition and Feed Technology	3(2-0-1x2)
10	FAC-313	Coldwater Aquaculture	2(1-0-1x2)
11	FAC-314	Practical Fish Production	2(0-0-2x2)
12	FAC-321	Biotechnology and Bioinformatics	2(1-0-1x2)
13	FAC-322	Coastal Aquaculture and Mariculture	2(2-0-0)
14	FAC-323	Fish Disease and Management	3(2-0-1x2)
III	Fisheries Resource Management		24(15+9)
1	FFB-111	Taxonomy of Finfish	3(2-0-1x2)
2	FFB-112	Taxonomy of Shellfish	2(1-0-1x2)
3	FFB-121	Anatomy, Biology and Physiology of Shellfish	3(2-0-1x2)
4	FFB-122	Anatomy and Biology of Finfish	3(2-0-1x2)
5	FFB-123	Inland Fisheries	3(2-0-1x2)
6	FFB-211	Fish Physiology	3(2-0-1x2)
7	FFB-221	Marine Fisheries	3(2-0-1x2)
8	FFB-222	Fish Genetic Resource Management	2(1-0-1x2)
9	FFB-311	Fish Population Dynamics and Stock Assessment	2(1-0-1x2)
IV	Aquatic Environment Management		25(15+10)
1	FFH-111	Microbiology	4(2-0-2x2)
2	FFH-112	Soil and Water Chemistry	3(2-0-1x2)
3	FFH-113	Meteorology and Geography	2(1-0-1x2)
4	FFH-121	Limnology	3(2-0-1x2)
5	FFH-122	Oceanography	3(2-0-1x2)

6	FFH-211	Disaster Management in Fisheries	2(1-0-1x2)
7	FFH-212	Marine Biology	3(2-0-1x2)
8	FFH-221	Aquatic Ecology and Biodiversity	2(1-0-1x2)
9	FFH-321	Aquatic Pollution	3(2-0-1x2)

Sl. No.	Course No.	Title of Course	Credit hours
V	Fish Harvest and Processing Technology		23(14+09)
1	FPT-211	Fish in Nutrition	2(1-0-1x2)
2	FPT-212	Refrigeration and Equipment Engineering	2(1-0-1x2)
3	FPT-221	Fishing Craft Technology	2(1-0-1x2)
4	FPT-222	Fishing and Gear Technology	4(3-0-1x2)
5	FPT-311	Freezing Technology	2(1-0-1x2)
6	FPT-312	Canning and Fish Packaging Technology	3(2-0-1x2)
7	FPT-313	Fish Products and Byproducts Technology	3(2-0-1x2)
8	FPT-321	Navigation and Seamanship	2(1-0-1x2)
9	FPT-322	Fish Microbiology and Quality Assurance	3(2-0-1x2)
VI	Fisheries Extension Education		5(4+1)
1	FEX-211	Fisheries Administration and Legislation	2(2-0-0)
2	FEX-221	Fisheries Extension Education	3(2-0-1x2)
VII	Others Courses		43
1	FWE-411	Fisheries Work Experience	20
2	NSS-201	NSS	2
3	FWP-101	Work Programme	1(0-0-1x3)
4	FAC-421 FPT-421	Hands on Training (Experiential Learning Programme) on Aquafarming Fish Postharvest Technology	20
Total		Courses - 55	Credits - 171

POSTGRADUATE LEVEL

M.F.Sc. - AQUACULTURE

Sl. No.	Course No. and Name of the Course	Credits
(A) Core Courses (16 credits)		
1	FAC-521 Sustainable Aquaculture	2(1-0-1)
2	FAC-561 Advanced Freshwater Aquaculture	2(1-0-1)
3	FAC-570 Soil and Water Quality Management in Aquaculture	2(1-0-1)
4	FAC-571 Seed Production and Hatchery Management of Finfish and Shellfish	3(2-0-1)
5	FAC-600 Seminar	1
6	FAC-665 Aquatic Animal Health Management	3(2-0-1)
7	FAC-670 Advances in fish Nutrition and Feed Technology	3(2-0-1)
(B) Basic Supporting Courses (5 Credits)		
1	TID-502 Aquaculture Engineering	2(1-0-1)
2	BPS-561 Statistical Methods	3(2-0-1)
(C) Optional/Minor Courses (9 Credits)		
1	FAC- 550 Advanced Techniques in Brackish and Marine Aquaculture	2(1-0-1)

2	FAC- 601 Special; Problem	1(0-0-1)
3	FAC- 615 Trout and Mahseer Fish Farming Techniques	2(1-0-1)
4	FAC- 620 Larval Nutrition and Culture of Fish Food Organisms	2(1-0-1)
5	FAC- 625 Applied Genetics in Aquaculture	2(1-0-1)
6	FAC- 673 Integrated Fish Farming and Waste Recycling	2(1-0-1)
(D) Thesis Research (20 Credits)		
	FAC-690 Masters Thesis Research	20
	Total	50

M.F.Sc. - FISHERY BIOLOGY

Sl. No.	Course No. and Name of the Course	Credits
(A) Core Courses (17 Credits)		
1.	FFB- 611 Inland Fisheries Resources	3(2-0-1)
2.	FFB- 615 Marine Fisheries Resource Management	2(2-0-0)
3.	FFB- 621 Ecosystems, Biodiversity and Conservation	3(2-0-1)
4.	FFB- 625 Fish Stock Assessment	2(1-0-1)
5.	FFB- 631 Feeding and Reproductive Biology of Finfish	3(2-0-1)
6.	FFB- 635 Developmental Biology of Finfish and Shellfish	3(2-0-1)
7.	FFB- 600 Master's Seminar	1(0-0-1)
(B) Basic Supporting Courses (3 credits)		
1.	BPS- 561 Statistical Methods	3(2-0-1)
(C) Optional / Minor Courses (10 credits)		
1.	FFB- 511 Modern Techniques in Ichthyotaxonomy	2(1-0-1)
2.	FFB- 515 Fisheries Regulations	2(2-0-0)
3.	FFB- 521 Remote Sensing and GIS for Fisheries Management	2(1-0-1)
4.	FFB- 601 Special Problem	1(0-0-1)
5.	FFB- 641 Advanced Biology of Crustaceans and Molluscs	2(1-0-1)
6.	FFB- 645 Fish Genetics, Sex Control and Hybridization	2(1-0-1)
(D) Thesis Research (20 Credits)		
1.	FFB- 690 Master's Thesis Research	20
	Total	50

M.F.Sc. - AQUATIC ENVIRONMENT MANAGEMENT

Sl. No.	Course No. and Name of Course	Credits
(A) Core Courses (18 Credits)		
1	FFH-555 Advanced Aquatic Environment and Biodiversity	3(2-0-1)
2	FFH-560 Chemical Interaction in Aquatic Environment	3(2-0-1)
3	FFH-565 Ecology and Management of Limnetic Environment	3(2-0-1)
4	FFH-570 Aquatic Pollution and Wastewater Management	3(2-0-1)
5	FFH-600 Master's Seminar	1(1-0-1)
6	FFH- 615 Fisheries Oceanography	2(1-0-1)
7	FFH-631 Integrated Coastal Zone Management	3(2-0-1)
(B) Basic Supporting Course (3 Credits)		

1	BPS- 561 Statistical Methods	3(2-0-1)
(C) Optional/ Minor Courses (9 Credits)		
1	FFH-601 Special Problem	1(1-0-1)
2	FFH-635 Planktonology	2(1-0-1)
3	FFH-637 Ecology of Benthic Organism	2(1-0-1)
4	FFH-641 Aquatic Microbiology	3(2-0-1)
5	FFH-645 Environmental Toxicology	2(1-0-1)
6	FFH-651 Environmental Biotechnology	2(1-0-1)
(D) Thesis Research (20 Credits)		
1	FFH-690 Master's Thesis Research	20
Total		50

DOCTORATE LEVEL - Ph.D.

AQUACULTURE

Sl. No.	Course No.	Name of the Course	Credits
(A) Core Courses (11 Credits)			
1.	FAC-711	Advances in Aquaculture Production Systems	3(2-0-1)
2.	FAC-721	Aquaculture and Ecosystem Management	3(2-0-1)
3.	FAC-731	Advances in Seed Production and Hatchery Management	3(2-0-1)
4.	FAC-788	Doctoral Seminar I	1(0-0-1)
5.	FAC-789	Doctoral Seminar II	1(0-0-1)
(B) Basic Supporting Courses (4 Credits)			
1.	BPS-661	Experimental Statistics	4(3-0-1)
(C) Optional Courses (5 Credits)			
1.	FAC-601	Special Problem	1-2
2.	FAC-622	Aquaculture Development Planning and Management	2(1-0-1)
3.	FAC-681	Intensive Farming Systems for Fresh water Fishes	2(1-0-1)
4.	FAC-741	Applied Fish Genetics and Breeding	2(1-0-1)
5.	FAC-745	Applied Aquaculture Biotechnology	2(1-0-1)
6.	FAC-766	Aquatic Animal Health Management and Quarantine	3(2-0-1)
(D) Minor Courses: (10 credits)			
(E) Thesis Research: (45 Credits)			
1.	FAC-790	Ph.D Thesis Research	45
Total			75

FISHERIES RESOURCE MANAGEMENT

Sl. No.	Course Number and Name of the Course	Credits
(A) Core Courses (11 Credits)		
1.	FFB- 711 Assessment of Aquatic Biodiversity	2(1-0-1)
2.	FFB- 715 Applications of Fisheries Models in Stock Assessment	2(1-0-1)
3.	FFB- 721 Conservation and Management of Exploited Fisheries Resources	2(1-0-1)

4.	FFB-725 Management of Inland Fishery Resources	3(2-0-1)
5.	FFB- 788 Doctoral Seminar I	1
6.	FFB- 789 Doctoral Seminar II	1
(B) Basic Supporting Courses (04 credits)		
1.	BPS- 661:Experimental Statistics	4(3-0-1)
(C) Optional Courses (5 credits to be elected)		
1.	FFB- 601 Special Problem	1-2
2.	FFB- 651 Data Collection and Estimation of Exploited Fisheries Resources	2(0-0-2)
3.	FFB- 655 Issues in Capture Fisheries	2(1-0-1)
4.	FFB- 661 Fisheries Environmental Assessment	2(1-0-1)
5.	FFB- 731 Marine Fishery Resources	2(2-0-0)
6.	FFB- 735 Developmental Biology of Fish	2(1-0-1)
7.	FFB- 741 Advances in Feeding, Growth and Reproduction in Finfish	2(1-0-1)
8.	FFB- 745 Management and Conservation of Fish Genetic Resources	2(2-0-0)
(D) Minor Courses (10 Credits)		
(E) Thesis Research (45 Credits)		
1.	FFB- 790 Ph.D. Thesis Research	45
Total		75

The U.G. and P.G. students are given ample opportunities for practical training on fish culture, fish breeding, fish processing, fishery extension etc. Under fisheries work experience the students get the opportunity for intensive interaction with fish farmers, entrepreneurs and fishery industry, for development of managerial skill. After completing the degree programs the students can independently carry out fish culture, hatchery seed production, management of fish and shell-fish harvest and processing sector.

Hand-on-training pertains to attachment of students to aquafarms or fish processing units for practical training in India and abroad.