

Republika ng Pilipinas
(Republic of the Philippines)
MINISTRI NG EDUKASYON, KULTURA AT ISPORTS
(MINISTRY OF EDUCATION, CULTURE AND SPORTS)
Maynila

June 22, 1983

MECS O R D E R
No. 31, s. 1983

COMMENCEMENT OF CLASSES AND THE OFFERING OF THE THREE-YEAR
POST-SECONDARY DIPLOMA IN FISHERY TECHNOLOGY CURRICULUM
AT THE REGIONAL INSTITUTES OF FISHERIES TECHNOLOGY

To: Bureau Directors
Regional Directors
Schools Superintendents
Presidents, State Colleges and Universities
Vocational School Superintendents/Administrators

1. The Government of the Republic of the Philippines is committed to implement the Sixth Education Project in accordance with the terms and conditions and timetables of Loan Agreement No. 1786-PH otherwise known as the Fisheries Training Project.
2. Under Section 4.05 of the Loan Agreement, the Regional Institutes of Fisheries Technology located at Cagayan State University, Aparri, Cagayan; Bicol University, Tabaco, Albay; Palawan National Agricultural College, Puerto Princesa City; Catbalogan, Samar; Carmen, Cebu; Rio Hondo, Zamboanga City; and Panabo, Davao del Norte, are to offer, starting with academic year 1983-84, programs leading to a diploma in Fishery Technology.
3. Further, under paragraph 3.14 of the World Bank's Appraisal Report for the fisheries training project, the BSF programs currently offered at the institutes will be discontinued by 1984 except for the degree programs offered at the institute of Zamboanga.
4. In view of these commitments of the government in the implementation of the program under this project, the project institutes will, starting school year 1983-84, commence to offer the three-year post-secondary program leading to Diploma in Fishery Technology specializing in Marine Fisheries, Inland Fisheries or Fish Processing. The new RIFT curriculum is inclosed.
5. As a strategy to attract more and qualified students into the RIFT program and towards the realization of quality manpower targets envisioned under the program, RIFT students shall be exempted from the payment of tuition or other school fees. Each RIFT will enroll no more than 150 students each school year.

6. All the RIFTs will maintain a teacher-students ratio of 1:12-15 to fully avail quality training to students and enable them complete accessibility and utilization of the facilities of the institutes.

7. This Order will take effect immediately and shall be observed by all concerned.

(SGD.) ONOFRE D. CORPUZ
Minister

Incl.:
As stated

Reference:
None

Allotment: 1-3--(D.O. 1-76)

To be indicated in the Perpetual Index
under the following subjects:

BLUE REVOLUTION
CLASSES
DIPLOMA
FEES
SCHOOLS
STUDENTS
UNIVERSITIES and COLLEGES
VOCATIONAL EDUCATION

RIFT CURRICULUM

(Leading to Diploma in Fisheries Technology)

FISH CAPTUREFirst Year

First Semester			Second Semester		
Subject	Hrs./Week	Credit	Subject	Hrs./Week	Credit
English I	3	3	Physics	8(2-6)	4
Math I	3	3	English 2	3	3
Applied Chemistry	8(2-6)	4	Meteorology	3	3
Gen. Fisheries & Laws	3	3	Biochemistry	8(2-6)	4
Aquatic Biology	9(3-6)	5	Fish Capture I	9(3-6)	5
M.S. II		(1.5)	Ext. Educ. I	3	3
P.E. I		(1.0)	M.S. 12		(1.5)
			P.E. 2		(1.0)
Total	26 Hrs	18	Total	34 Hrs.	22

Summer

Actual Fishing - non-credit

Second Year

Fish Handling & Ref.	8(2-6)	4	Fishery Resource Management	5(2-3)	3
Ecology	3	3	Seamanship & Nav.	9(3-6)	5
Ext. Educ. II	3	3	Oceanology	8(2-6)	4
Fish Capture II	9(3-6)	5	Boat Building / Repair & Maintenance	9(3-6)	5
Marine Engineering	8(2-6)	4	Ext. Educ. III	7(1-6)	3
Fishery Business	3	3	M.S. 22		(1.5)
M.S. 21		(1.5)	P.E. 4		(1.0)
P.F. 3		(1.0)			
Total	34 Hrs.	22	Total	38 Hrs.	20

Summer

Fish Capture III - 5 Units

Third Year

First and Second Semester 1/

On-the-Job Training	
Duration - 10 months	- 12 units
In any government or private fishery entities	
Total No. of Units	99 Units

1/ After successful completion of On-the-Job Training and submission of Required Term Paper, students shall be awarded the Diploma in Fisheries Technology.

FISH PRESERVATION

First Year

<u>First Semester</u>			<u>Second Semester</u>		
<u>Subject</u>	<u>Hrs./Week</u>	<u>Credit</u>	<u>Subject</u>	<u>Hrs./Week</u>	<u>Credit</u>
English I	3	3	Physics	8(2-6)	4
Math I	3	3	English 2	3	3
Applied Chemistry	8(2-6)	4	Meteorology	3	3
Gen. Fisheries & Laws	3	3	Biochemistry	8(2-6)	4
Aquatic Biology	9(3-6)	5	Fish Proc. I	9(3-6)	5
M.S. 11		(1.5)	Ext. Educ. I	3	3
P.E. 1		(1.0)	M.S. 12		(1.5)
			P.E. 2		(1.0)
Total	26 Hrs.	18	Total	34 Hrs.	22

Summer

Fish Processing - PRACTICUM - non-credit

Second Year

Fish Handling & Ref.	8(2-6)	4	Fishery Resource		
Ecology	3	3	Management	5(2-3)	3
Ext. Educ. II	3	3	Prod. Analysis &		
Fish Proc. II	9(3-6)	5	Standardization	9(3-6)	5
Micro-biology	8(2-6)	4	Fish Proc. III	9(3-6)	5
Fishery Business	3	3	Plant Sanitation		
M.S. 21		(1.5)	& Safety	3	3
P.E. 3		(1.0)	Ext. Educ. III	7(1-6)	3
			M.S. 22		(1.5)
			P.E. 4		(1.0)
Total	34 Hrs.	22	Total	33 Hrs.	19

Third Year

First and Second Semester 1/

On-the-Job Training
 Duration - 10 months 12 Units
 In any government or private fishery entities
 Total No. of Units - 93 Units

1/ After successful completion of On-the-Job Training and submission of the required Term Paper, students shall be awarded the Diploma in Fisheries Technology.

FISH CULTURE

First Year

First Semester			Second Semester		
<u>Subject</u>	<u>Hrs./Week</u>	<u>Credit</u>	<u>Subject</u>	<u>Hrs./Week</u>	<u>Credit</u>
English I	3	3	Physics	8(2-6)	4
Math I	3	3	English 2	3	3
Applied Chemistry	8(2-6)	4	Meteorology	3	3
Gen. Fisheries & Laws	3	3	Biochemistry	8(2-6)	4
Aquatic Biology	9(3-6)	5	Fish Culture I	9(3-6)	5
M.S. II		(1.5)	Ext. Educ. I	3	3
P.E. I		(1.0)	M.S. 12		(1.5)
			P.E. 2		(1.0)
Total	26 Hrs.	18	Total	34 Hrs.	22

Summer

Fishpond preparation for Stocking - PRACTICUM - non-credit

Second Year

Fish Handling & Ref.	8(2-6)	4	Fishery Resource Management	5(2-3)	3
Ecology	3	3	Fish Breeding & Hatchery Mgt.	8(2-6)	4
Ext. Educ. II	3	3	Limnology	8(2-6)	4
Fish Culture II	9(3-6)	5	Fish Culture III	9(3-6)	5
Fish Nutrition & Diseases	8(2-6)	4	Ext. Educ. III	7(1-6)	3
Fishery Business	3	3	M.S. 22		(1.5)
M.S. 21		(1.5)	P.E. 4		(1.0)
P.E. 3		(1.0)			
Total	34 Hrs.	22	Total	37 Hrs.	19

Third Year

First and Second Semester 1/

On-th-Job Training
 Duration - 10 months 12 units
 In any government or private fishery entitites
 Total No. of Units of the Course 93 Units

1/ After successful completion of On-th-Job Training and submission of required Term Paper, students shall be awarded the Diploma in Fisheries Technology.

Description of Courses

ENGLISH I

- Development of proficiency in the English language, with particular emphasis on reading, writing and using of materials on both technical and non-technical literature.
Credit: 3 units, 3hrs a week
(3 lect.)

MATHEMATICS I

- Integrated College Algebra; Plane Trigonometry and Statistics and their application to fisheries.
Credit: 3 units 3 hrs. a week
(3 lect.)

APPLIED CHEMISTRY

- Principles of general chemistry and their application to the three streams or areas of specialization.
Credit: 4 units 8 hrs. a week
(2 lect. and 6 lab.)

GENERAL FISHERIES AND LAWS

- Overview of the three major fields of specialization, namely: Fish Processing, Fish Capture and Fish Culture. It includes fishery laws affecting exploitation, protection and conservation of fishery resources (PD 704).
Credit: 3 units 3 hrs. a week
(3 lect.)

AQUATIC BIOLOGY

- The study of the life and behavior of fishes, invertebrates, including the study of anatomy and taxonomy of flora and fauna.

Credit: 5 units 9 hrs. a week
(Lect. and 6 lab.)

PHYSICS

- Fundamentals/principles of physics and its practical application to fisheries; principles and theories on measurement, forces and motion, stresses and strain. Physical properties of materials, manipulation of scientific instruments and apparatus.

Credit: 4 units 8 hrs. a week
(2 lect. and 6 lab.)

ENGLISH

- Study on writing reports in fishery and technical subjects, practices and principles of correspondence writing such as letters of application, sales and order letters, collecting injury, claims and adjustments, and study of professional interview.

Credit: 3 units 3 hrs. a week
(3 lect.)

METEOROLOGY

- Elements of Weather - forecasting methods and techniques as applied to fisheries investigation.

Credit: 3 units 3 hrs. a week
(3 lect.)

BIOCHEMISTRY

- An integrated application of the theories of organic chemistry to the properties and chemical reactivities of protein, fats and carbohydrates with emphasis on fishery products.

Credit: 4 units 8 hrs. a week
(2 lect. and 6 lab.)

FISH CAPTURE I

- The mechanics of fishing gear design and construction, material selection including material testing.

Credit: 5 units 9 hrs. a week
(3 lect. and 6 lab.)

EXTENSION EDUCATION I

- Extension philosophy, psychology, organization and programming of extension education and the basic component, effective to extension which includes visits,

demonstrations, exhibits, radio, TV, and other visual aids. It also includes the study of fishery cooperatives.

Credit: 3 units 3 hrs. a week
(3 lect.)

FISH CULTURE I
(Fishpond Engineering.)

- Design, construction, and maintenance of fresh, estuarine, and marine aquaculture facilities including culture, protection, principles and practices in these environments.

Credit: 5 units 9 hrs. a week
(3 lect. and 6 lab.)

FISH PROCESSING I

- Principles and general methods of processing fish and fishery products.

Credit: 5 units 9 hrs. a week
(3 lect. and 6 lab.)

FISH HANDLING AND REFRIGERATION

- Principles and techniques of handling, icing, storing, and refrigerating of fish and fishery by-products.

Credit: 4 units 8 hrs. a week
(2 lect. and 6 lab.)

ECOLOGY

- The influence of the physio-chemical and biological properties of aquatic environment on the distribution of aquatic organisms.
Credit: 3 units 3 hrs. a week
(3 lect.)

EXTENSION EDUCATION II

- Program development and evaluation of socio-economic conditions of rural community, planning and techniques, study of formulating criteria and judging evaluation outcomes of extension programs. Basic principles on cooperative management, major planning consideration, concept of organization and the coordination process, the control function and sub-function.
Credit: 3 units 3 hrs. a week
(3 lect.)

FISH CAPTURE II

- The principles and methodologies of fishing operation including preservation and maintenance of fishing gears.
Credit: 3 units 9 hrs. a week
(3 lect. and 6 lab.)

**FISH NUTRITION AND
DISEASES**

- Fundamentals and applied aspects of fish nutrition. The nature of diseases, parasites and predators of fishes, their practical identification, treatment and control.

Credit: 4 units 8 hrs. a week
(2 lect. and 6 lab.)

FISH PROCESSING II

- Principles and methods of canning fish and fishery products including methods/techniques on a commercial scale and the operation of the different machineries and appliances used in fish processing.

Credit: 5 units 9 hrs. a week
(3 lect. and 6 lab.)

MICROBIOLOGY

- Bacteria, yeast, molds, and parasites associated with fish and other fishery products; their characteristics, function, effects, treatment and control.

Credit: 4 units 8 hrs. a week
(2 lect. and 6 lab.)

NAVIGATION AND SEAMANSHIP - The basic principles of coastal and high seas navigation, study of marine rules and regulations of the road, piloting, boat handling and marlin-spike seamanship.

Credit: 5 units 9 hrs. a week
(3 lect. and 6 lab.)

MARINE ENGINEERING

- Care, operation and maintenance of marine fisheries equipment including metal works and machine shop practices.

Credit: 4 units 8 hrs. a week
(2 lect. and 6 lab.)

FISHERY BUSINESS

- Basic principles in the operation and management of commercial fishery enterprise with integration of simplified accounting and bookkeeping.

Credit: 3 units 3 hrs. a week
(3 lect.)

FISH CULTURE II

- Techniques of production in estuarine ecosystem, fresh and brackishwater ponds.

Credit: 5 units 9 hrs. a week
(3 lect. and 6 lab.)

FISHERY RESOURCE MANAGEMENT

- Basic principles and methods of management and conservation of the resources in fisheries.

Credit: 3 units 5 hrs. a week
(2 lect. and 3 lab.)

OCEANOLOGY

- The physics, chemistry, and biology of ocean waters and its relationship with fisheries biology; sampling and analytical techniques; study of tides and currents and their relation to fisheries.

Credit: 4 units 8 hrs. a week
(2 lect. and 6 lab.)

BOAT BUILDING/REPAIR AND MAINTENANCE

- Principles and practices of fishing boat construction which includes drafting and lofting, study of blue print reading, wood working, and different methods of repair and maintenance of a fishing boat.

Credit: 5 units 9 hrs. a week
(3 lect. and 6 lab.)

EXTENSION EDUCATION III

- Field practice of extension principles and methodologies.

FISH BREEDING AND
HATCHERY MANAGEMENT

Credit: 3 units 7 hrs. a week
(1 lect. and 6 lab.)

- Fundamentals of fish breeding hatchery and nursery operations; the biology and culture of fish and other aquatic animals in their early life stages.

Credit: 4 units 8 hrs. a week
(2 lect. and 6 lab.)

FISH PROCESSING III

- New developments in processing fish and other fishery products, development of new products, techniques, including the utilization of other aquatic resources and fishery by-products.

Credit: 5 units 9 hrs. a week
(3 lect. and 6 lab.)

FISH CULTURE III

- Principles and practices of mariculture such as: pens, cages, coves, bays, lagoons, and other land-lock water including oyster, mussel, and seaweed farming.

Credit: 5 units 9 hrs. a week
(3 lect. and 6 lab.)

PLANT SANITATION AND
SAFETY

- Hygiene principles and practices in fish processing plant including the safe and proper use of tools equipment and machineries.
Credit: 3 units 3 hrs. a week
(3 lect.)

PRODUCTION ANALYSIS
AND STANDARDIZATION

- Product analysis which includes organoleptic assessment, objective analysis (chemical and microbiological), density of raw material, processing requirement and establishment of product standards.
Credit: 5 units 9 hrs. a week
(3 lect. and 6 lab.)

FISH CAPTURE III

- Actual fishing integrated with Navigation and Seamanship practice.
Credit: 5 units 9 hrs. a week
(lect. and 6 lab.)

JOB TRAINING

- Internship, field work or extension service in any government or private enterprise.
Credit: 12 units - 10 months
Term Paper required.

Limnology

- The physics, chemistry and biology of inland waters and its relationship with fisheries biology; sampling and analytical techniques.

Credit: 4 units 8 hrs. a week

(2 lect. and 6 lab.)