



DEPARTMENT OF Industrial Fish and Fisheries
TEACHING PLAN FOR SEMESTER

NAME OF FACULTY: Dr. Utpal Kumar Barman

PAPER: Fish Seed Production Technology (CC 6)

LECTURES ALLOTTED: 7/ Week

ALLOTTED SYLLABUS:

TOPIC/SUBTOPIC:	
LEC. NO.	PROPOSED TOPIC(S) TO BE TAUGHT
1.	Brooder and fish seed transportation.
2.	Bundh breeding.
3.	Marine seed production
TOPIC/SUBTOPIC:	
1.	Transportation of fish seed techniques, types and its problems.
2.	Brooder fish transportation system.
3.	Use of anesthetics and antibiotics during transportation.
4.	Seed production techniques of seabass.
5.	Seed production techniques of milk fish.

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6.	Seed production techniques of mullets.
7.	Seed production techniques of cobia.
8.	Seed production techniques of silver pompano.

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TEACHING PLAN FOR SEMESTER III

NAME OF FACULTY : Ram Krishna Das

PAPER : CC 5 and CC 6

LECTURES ALLOTTED:

ALLOTTED SYLLABUS:

TOPIC/SUBTOPIC: CC 5	
LEC. NO.	PROPOSED TOPIC(S) TO BE TAUGHT
1	Process of replication
2.	Transcription of prokaryotes general information
3.	Process of transcription
4.	Translation
5.	Translation
6.	Revision
TOPIC/SUBTOPIC: CC 6	
1.	Histology of ovary and testis
2.	Spermatogenesis
3.	Oogenesis
4.	Induced breeding of fish

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TEACHING PLAN FOR SEMESTER V

NAME OF FACULTY : Ram Krishna Das

PAPER : CC 11, CC 12

LECTURES ALLOTTED:

ALLOTTED SYLLABUS:

TOPIC/SUBTOPIC: CC 11	
LEC. NO.	PROPOSED TOPIC(S) TO BE TAUGHT
1.	Fish preservation- Drying
2.	Fish preservation-salting
3.	Fish preservation- smoking
4.	Fish preservation-canning
5.	Fish preservation revision
TOPIC/SUBTOPIC: CC 12	
1.	Structure of lipid
2.	Oxidative phosphorylation
3.	Revision

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DEPARTMENT OF IFF
TEACHING PLAN FOR SEMESTER

NAME OF FACULTY : SHREYOSREE GANGULY

SEMESTER: I

PAPER :CC2 (CAPTURE FISHERIES)

LECTURES ALLOTTED:

ALLOTTED SYLLABUS:

TOPIC/SUBTOPIC:	
LEC. NO.	PROPOSED TOPIC(S) TO BE TAUGHT
1	COLDWATER FISHERIES
TOPIC	SUBTOPIC:
COLDWATER FISHERIES	COLDWATER FISHERIES RESOURCES OF INDIA, ECOLOGICAL CHARACTERISTICS OF COLD WATER BODIES OF INDIA,PRESENT STATUS,PROSPECT,PROBLEMS AND DEVELOPMENT OF COLD WATER FISHERIES IN INDIA

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TEACHING PLAN FOR SEMESTER

NAME OF FACULTY : SHREYOSREE GANGULY

SEMESTER: III

PAPER : CC7 (BRACKISH WATER AQUACULTURE AND MARICULTURE)

LECTURES ALLOTTED:

ALLOTTED SYLLABUS:

TOPIC/SUBTOPIC:	
LEC. NO.	PROPOSED TOPIC(S) TO BE TAUGHT
1	CULTURE OF CRUSTACEA
2	MARICULTURE
3	MOLLUSC AND SEAWEED CULTURE
TOPIC	SUBTOPIC:
CULTURE OF CRUSTACEA	CULTIVABLE SPECIES OF SHRIMP IN BRACKISH WATER, EXTENSIVE, SEMI INTENSIVE AND INTENSIVE SHRIMP FARMING TECHNIQUE, LOBSTERS CULTURE TECHNIQUE, PROBLEM AND PROSPECT IN INDIA, LOBSTER FATTENING
MARICULTURE	SCOPE AND SPECIES CULTURED ,SELECTION OF SITE FOR SEA FARMING, DIFFERENT DESIGN OF OPEN SEA FARMING- CONSTRUCTION OF CAGES- BIOENGINEERING PROBLEM AND SOLUTION
MOLLUSC AND SEAWEED CULTURE	MOLLUSCAN CULTURE-EDIBLE OYSTER, MUSSEL AND CLAMS CULTURE TECHNIQUE, ECHINODERMS CULTURE- IMPORTANT SPECIES, CULTURE TECHNIQUES, CULTURE OF SEA WEEDS- CULTIVABLE SPECIES, CULTURE TECHNIQUES AND HARVESTING, IMPORTANT SEAWEED PRODUCTS

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DEPARTMENT OF Industrial Fish and Fisheries
TEACHING PLAN FOR SEMESTER

NAME OF FACULTY: Dr. Utpal Kumar Barman

PAPER: Brackishwater Aquaculture & Mariculture Lab

LECTURES ALLOTTED: 3/week

ALLOTTED SYLLABUS:

TOPIC/SUBTOPIC:	
LEC. NO.	PROPOSED TOPIC(S) TO BE TAUGHT
1.	Estimation of Biological Oxygen Demand
2.	Estimation of Soil Organic Carbon
3.	Analysis of water parameters
4.	Analysis of soil parameters
5.	Visit to any Brackishwater fish farm.
TOPIC/SUBTOPIC:	
1.	Estimation of Biological Oxygen Demand of water.
2.	Measurement of Dissolved Oxygen content of water by titration method.
3.	Measurement of Total hardness of water by titration method.
4.	Measurement of Total alkalinity of water by titration

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	method.
5.	Measurement of Nitrogen content of water by titration method.
6.	Measurement of Phosphate content of water by titration method.
7.	Estimation of soil pH
8.	Estimation of soil Potassium and Organic carbon.

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DEPARTMENT OF Industrial Fish and Fisheries
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NAME OF FACULTY: Dr. Utpal Kumar Barman

PAPER: Fishery Microbiology

LECTURES ALLOTTED: 6/Week

ALLOTTED SYLLABUS:

TOPIC/SUBTOPIC:	
LEC. NO.	PROPOSED TOPIC(S) TO BE TAUGHT
1.	Isolation and culture of microbes
2.	Bacteria in culture ponds
3.	Fish microbiology
TOPIC/SUBTOPIC:	
1.	Characteristics features of bacterial growth curve. Effect of environmental factors of growth.
2.	Nutrition and growth of bacteria, different types of media for isolation of bacteria and fungi.
3.	Isolation and cultivation of bacteria and fungi from water and sediment. Different culture techniques.

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4.	Isolation and cultivation of bacteria and fungi from water and sediment. Different culture techniques.
5.	Isolation and cultivation of bacteria and fungi from water and sediment. Different culture techniques.
6.	Cultural characteristics and epidemiology of <i>A. hydrophila</i> , <i>Pseudomonas</i> , <i>Salmonella</i> .
7.	Microbial spoilage of fish and shell fish. Spoilage microflora.
8.	Intrinsic and extrinsic factors affecting spoilage.
9.	Microflora associated with body parts, food borne pathogens, sources of contamination.s

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TEACHING PLAN FOR SEMESTER

NAME OF FACULTY: Dr. Utpal Kumar Barman

PAPER: Fishery Microbiology Lab

LECTURES ALLOTTED: 3/Week

ALLOTTED SYLLABUS:

TOPIC/SUBTOPIC:	
LEC. NO.	PROPOSED TOPIC(S) TO BE TAUGHT
1.	Sterilization techniques- dry heating, autoclaving
2.	Media preparation
3.	Isolation and maintenance of bacteria from fishes and water.
4.	Gram staining of bacteria
TOPIC/SUBTOPIC:	
1.	Sterilization technique- dry heating, autoclaving (Group A&B).
2.	Gram staining of bacteria (Group A).
3.	Gram staining of bacteria (Group B).
4.	Media preparation (Group A&B).

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5.	Media preparation (Group A).
6.	Media preparation (Group B).
7.	Isolation of bacteria from fish gut content and water (Group A&B).
8.	Isolation of bacteria from fish gut content and water (Group A).
9.	Isolation of bacteria from fish gut content and water (Group B).
10.	Maintenance of bacteria (Group A&B)

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NAME OF FACULTY: Dr. Utpal Kumar Barman

PAPER: Entrepreneurship Development

LECTURES ALLOTTED: 3/week

ALLOTTED SYLLABUS:

TOPIC/SUBTOPIC:	
LEC. NO.	PROPOSED TOPIC(S) TO BE TAUGHT
1.	Marketing management
2.	Statutory provisions
3.	Knowledge input
4.	Data base management
TOPIC/SUBTOPIC:	
1.	Elements of marketing and sales management.
2.	Nature of product and market strategy.
3.	Packing- types and methods
4.	Advertising and after sales services.
5.	Import - Export procedure and methods.

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6.	Analyzing marketing opportunities, marketing mix, market survey techniques.
7.	Licensing and Registration of a company, factory acts.
8.	Industrial economic policies, sickness in small scale industries, management information system.
9.	Books of accounts, financial statements.

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NAME OF FACULTY: Dr. Utpal Kumar Barman

PAPER: Pearl Culture

LECTURES ALLOTTED: 4/Week

ALLOTTED SYLLABUS:

TOPIC/SUBTOPIC:	
LEC. NO.	PROPOSED TOPIC(S) TO BE TAUGHT
1.	Biology of Pearl Oyster
2.	Natural process of pearl formation
3.	Pearl Oyster culture
4.	Disease and Predators of Pearl Oyster
5.	Present status of pearl culture
TOPIC/SUBTOPIC:	
1.	Biology of Pearl Oyster, Morphology.
2.	Life cycle of Pearl Oyster.
3.	Histology of mantle, Natural process of pearl formation, Chemical composition of pearl.
4.	Economic importance of pearls, Techniques of pearl

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	oyster culture for artificial production of pearl
5.	Raft, long lines, Pearl oyster baskets, under water platforms culture system
6.	Mother oyster culture/ collection of oyster, Pearl oyster surgery
7.	Post operative culture, harvesting of pearl, clearing of pearl
8.	Disease and predators of pearl oyster
9.	Present status, prospects and problems of pearl industry in India.

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NAME OF FACULTY : SHREYOSREE GANGULY

PAPER : CC 11, DSE 1, DSE2

SEMESTER: V

LECTURES ALLOTTED:

ALLOTTED SYLLABUS:

TOPIC/SUBTOPIC:	
LEC. NO.	PROPOSED TOPIC(S) TO BE TAUGHT
1	FISH PRODUCT AND BY PRODUCT
2	INTRODUCTION TO MICROBIOLOGY
3	STRUCTURE OF MICROBES
4	AQUATIC MICROBIOLOGY
5	ENTREPRENEURSHIP BUILDING
TOPIC	SUBTOPIC:
FISH PRODUCT AND BYPRODUCT(CC11)	FISH OIL, FISH LIVER OIL, FISH MEAL, FISH MANURE, FISH FLOUR, FISH GLUE AND ISINGLASS
INTRODUCTION TO MICROBIOLOGY (DSE1)	HISTORY AND DEVELOPMENT OF MICROBIOLOGY, CONTRIBUTION OF LOUIS PASTEUR, KOCH AND WINOGRADSKY- DIVERSITY OF MICROBIAL COMMUNITY-GENERAL CHARACTERISTICS OF BACTERIA, FUNGI,VIRUSES, ALGAE, PROTOZOAN
STRUCTURE OF MICROBES	STRUCTURE OF PROKARYOTIC CELL, STRUCTURE AND FUNCTION OF BACTERIAL CELL WALL,PLASMA MEMBRANE, CAPSULE, FLAGELLA, AND ENDOSPORE, STRUCTURE OF FUNGI AND YEAST CELL, STRUCTURE OF VIRUS, CLASSIFICATION OF VIRUSES,LIFE CYCLE BACTERIOPHAGES- LYTIC AND LYSOGENIC CYCLE
AQUATIC	MICROFLORA OF AQUATIC ENVIRONMENT, AUTOTROPIC

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MICROBIOLOGY	AND HETEROTROPIC MICROORGANISM IN AQUATIC ENVIRONMENT, NUTRIENT REGENERATION, ROLE OF MICROBES IN BIOGEOCHEMICAL-CARBON, NITROGEN, PHOSPHORUS AND SULPHUR CYCLES, AUTOCHTHONOUS AND ALLOCHTHONOUS MICRO ORGANISM IN AQUATIC ENVIRONMENT.
ENTREPRENEURSHIP BUILDING (DSE2)	<ol style="list-style-type: none">1. MEANING , IMPORTANCE, PSYCHOLOGICAL, SOCIOLOGICAL FACTORS AND DISTINCTIVE COMPETENCE, ENTREPRENEURSHIP PROCESS2. NEED , SCOPE, CHARACTERISTICS AND TYPES OF ENTREPRENEURSHIP, STED3. SOCIAL RESPONSIBILITY AND BUSINESS ETHICS4. HUMAN RESOURCES MANAGEMENT, LEADERSHIP, MOTIVATION ATTITUDE, COMMUNICATION, GROUP DYNAMICS, DELEGATION, SETTING OF GOAL, TRANSACTION ANALYSIS, CREATIVITY, SWOT, DECISION MAKING, STRESS MANAGEMENT

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