



AMITY UNIVERSITY

— UTTAR PRADESH —

COURSE CURRICULUM

Course Title: Fisheries Science

Course Code:

Credit Units:

L	T	P/S	SW/F W	TOTAL CREDIT UNITS
4		-	-	4

Course Objectives:

The aim of this course is to give knowledge about fisheries science-classification of fishes, anatomy, food and feeding habits, reproduction, population dynamics. Life cycles of some Indian fishes with brief knowledge if fish preservation and processing.

Pre-requisites:

Basic knowledge about vertebrate systematic and biology.

Student Learning Outcomes:

After completing the course:

- Student will be able to classify various fishes.
- Students will be able to describe basic anatomy of the fishes.
- Students will be able to summarize life history of some Indian fishes
- Students will be able to explain population dynamics and various methods of preservation and processing of fish.

Course Contents/Syllabus:

	Weightage (%)
Module I	20%
<p>Descriptors/Topics General Account of systematic classification of fishes. Classification based on degrees of movement. Zones inhabited and on manner of reproduction. Economically important groups of fishes general and brief account of elasmobranches, clupeoids, salmonoids, scombroids, gadoids, heterosomata, sciaenids, carangids. Trichiurids, cat fishes, crustaceans and molluscs.</p>	
Module II	

Descriptors/Topics Basic Anatomy of fish- digestive, circulatory, respiratory, nervous and reproductive systems. Food and feeding habits of marine fishes (general account), reproduction and spawning (general account), process of maturation- methods of assessment of spawning- biotic and abiotic factors affecting spawning in fishes.	20%
Module III	20%
Descriptors/Topics General account of life history of Indian fishes: oil sardines, Indian shad, mackerel, Bombay duck and Malabar sole and prawn.	
Module IV	20%
Descriptors/Topics Population Dynamics- theory of fishing- unit stock- recruitment- mortality. Migration fish tagging and marking. Marine fisheries of India- methods of fishery resources survey- acoustic method, survey of fish eggs and larvae, analyzing population features	
Module V	20%
Descriptors/Topics Principle methods of fish preservation and processing in India- freezing, canning, pickling, smoking - types of fish spoilage- causative factors.	

Pedagogy for Course Delivery:

Course will be delivered in the form of lectures, power point presentations and video presentation.

Lab/ Practicals details, if applicable:

List of Experiments: N/A

Assessment/ Examination Scheme:

Theory L/T (%)	Lab/Practical/Studio (%)	Total
100	-	100

Theory Assessment (L&T):

Continuous Assessment/Internal Assessment					End Term Examination
Components (Drop down)	Class test	Presentation/ Class test	Home assignment	attendance	
Weightage (%)	10	5	10	5	70

Lab/ Practical/ Studio Assessment:

	Continuous Assessment/Internal Assessment				End Term Examination		
Components (Drop down)							
Weightage (%)							

Text & References:

1. Peter B. Moyle, Joseph J. Cech 1990 Fishes: An Introduction to Ichthyology, Prentice Hall.
2. Carl E. Bond 1979 Biology of Fishes. W.B. Saunders Company, Philadelphia. York.
3. Bensam, P., 1999 Development of Marine Fisheries Science in India. Daya Publishing House.

Any other Study Material**Reference Books**

1. Simpson G.G.A. Roe & R.C. Lewontin 1966 Quantitative Zoology. Harcourt Brace and Company, New
2. Bal. D.V and K.V Rao 1990. Marine Fisheries of India Tata Mcgraw Hill Pub Co.
3. Biswas K.P 1996. A textbook of Fish, Fisheries and Technology 2nd Edition Narendra Publishing House New Delhi.
4. Cushing D.H.: Fisheries Biology, University of Wisconsin press, 1968.
5. Cushing D.H.: Marine ecology and fisheries, Cambridge University press, 1975.
6. Jhingran V.G.: Fish and fisheries of India, Hindustan Publ. Corpn., 1991.
7. Nelson J.S.: Fishes of the world, John Wiley, 1976.
8. Royce W.F.: Introduction to fishery sciences, Academic Press, 1972.