

Lecture schedule

S. No.	Topic	No. of classes
Theory		
1.	Distribution and types of stock - unit stock -mixed stock - straddling stock	01
2.	Characterization of stock (life history traits, truss network, environmental signals, otolith shape; genetic analyses, applied marks)	01
3.	Principle and general procedure of fish stock assessment	01
4.	Features of tropical and temperate fish stocks; Role of fish stock assessment in fisheries management	01
5.	Data requirement; Methods of sampling commercial catch	01
6.	Sampling design and fish measurements	01
7.	Assessment of fishery under data poor conditions	01
8.	Survey methods for inland fisheries	01
9.	Principles of growth; Growth parameters – estimation of growth parameters employing hard parts and size frequency	02
10.	Separation of cohorts	01
11.	Mortality - Decay curve; types of mortality; Estimation of total, natural and fishing mortality rates	02
12.	Timing and size of recruitment; Factors influencing recruitment	01
13.	Principle and estimation of gear selectivity - trawl net and gill net selectivity	01
14.	Eumetric fishing; Stock recruitment relationship - Cushing- Rickers - Beverton and Holt models	01
15.	Cohort dynamics and life history	01
16.	Analytical models - Virtual population analysis; Prediction models (Thompson and Bell model; Yield per recruit model and Relative Yield per Recruit model)	03
17.	Prey-predatory model	01
18.	Surplus production models / Holistic models: Schaefer's model, Fox model, Swept area method, Stochastic model	02
19.	Estimation of technical reference point MSY and other yield base reference point; economic and social reference points	01
20.	Bioeconomic modelling	01
21.	Economic models - MEY	01
22.	Swept area method - Box model	01
23.	Bayesian Stochastic models	01
24.	Multispecies models	01
25.	Ecosystem based models - Principles, Applications; Productivity models	01
26.	Ecopath with Ecosim	02
Practical		
1.	Cohort analysis	02
2.	Characterization of fish stock- Truss network analysis	01
3.	Study of Otolith shape	01
4.	Estimation of growth and mortality parameters (hard parts/length based/age based)	03
5.	Gear selectivity	02
6.	Stock recruitment relationship	02
7.	Analytical models - VPA, Thompson and Bell model, Beverton's Yield per recruit and Relative yield per recruit model	03
8.	Holistic models - Schaefer and Fox models	02

9.	Swept area method	01
10.	Use of MS Excel, FiSAT, Ecopath and Ecosim in stock assessment	03
11.	Case study	01
Total no. of classes		53



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Course Teacher