Semester:	07		
Course Code:	ZOOL 41802		
Course Name:	Fisheries Management		
Credit Value:	02		
Status:	Compulsory		
Pre-requisite:	ZOOL 31703		
Co-requisite:	None		
Hourly Breakdown:	Theory	Practical	Independent Learning
	20	30	50

Intended Learning Outcomes:
After completion of this course unit, the student will be able to:
1. describe the concepts and methods in fish stock assessment and fisheries management,
2. apply knowledge on fish stock assessment for management of capture fisheries,
3. discuss legal and regulatory aspects of marine fisheries,
4. discuss fisheries management issues of the Indian ocean with special reference to Sri Lanka,
5. demonstrate competency in using stock assessment software packages, and
6. propose appropriate management strategies for Sri Lankan fisheries.

Course Content:
World Fisheries: Overview and future trends. The need for fisheries management. The multispecies and multigear fisheries. Sampling commercial catches for fisheries management. Gear selection. Estimation of current and past population sizes: virtual population analysis and cohort analysis. Drawbacks in the concept of Maximum sustainable yield. Surplus yield models. Maximum Economic Yield. Yield per recruit models. Semi-quantitative methods in fish stock assessment.

Effects of legal regime of the sea on fisheries. Fisheries of the Indian Ocean and Regional Fisheries Management Organizations (RFMOs). Management of tuna and tuna like fisheries and shrimp and lobster fisheries. Untapped resources. Enhancement strategies in fisheries. Ecosystem approach to Fisheries. Fisheries management process and associated problems. Community-based fisheries management. Fisheries co-management.

Laboratory and field studies on: Analysis of fish catch data for fishing gear selectivity. Determination of growth parameters (in a length frequency sample) by Peterson Method. Estimation of total mortality and natural mortality, and use of Powell- Wetherall method. Analyses of fish catch data using models to predict fish yield. Analysis of length -frequency data using FiSAT software package. Field study at a marine fish landing center to study catch composition.

Teaching /Learning Methods:
A combination of lectures, laboratory and field practical sessions, use of stock assessment software and computer based learning, self-studies, seminars, assignments and group discussions, tutorial discussions.

Assessment Strategy:
Continuous assessment and end of semester examination. Percentage given for each sub-component indicates the percent contribution to the final marks.

Continuous Assessment 30 %		Final Assessment 70 %		
Details:		Theory 50 %	Practical 20 %	Other -
Assignments	10 %			
Group Presentations	10%			
Field survey /Laboratory reports	10%			

Recommended Readings:

1. King, M. (2007). Fisheries Biology, Assessment and Management, Fishing News Books, Oxford. Second edition.
2. Pauly, D. (1984). Fish Population Dynamics in Tropical Waters: A manual for use with programmable calculators, ICLARM, Manila.
3. Sparre, P. & S. C. Venema (1999). Introduction to tropical fish stock assessment, Part 2.FAO Fisheries Technical Paper 306/2 (Rev. 2), FAO, Rome.
4. Gayanilo, Jr., F.C. & D. Pauly (1997). FAO-ICLARM stock assessment tools: Reference
5. Manual. FAO Computerized Information Series, Fisheries. FAO, Rome.
6. www.fao.org
7. Selected scholarly monographs, review and research articles.