[A-3]COURSE SYLLABUS

1. Course Description (Approximately 100 words)

The course introduces students on how to obtain and maintain broodstock from the wild without compromising the genetic constitution of the stocks. Students are provided with tools to understand and evaluate the use of genetic approaches for fisheries management and aquaculture. The course also presents an integration of the concepts of basic biology of aquaculture species and hatchery techniques. Students are expected to develop a skill set that can be applied to the development of new hatchery protocols adapted from active areas of aquaculture research.

2. Course Goals and Objectives (Approximately 100 words)

At the end of the course the student should be able to:

Understand how a range of genetic and reproductive techniques can be integrated in managing hatchery populations of a range of aquaculture species
Use genetic approaches to provide fisheries and aquaculture management solutions.
To describe the infrastructures needed for effective hatchery operation
Design, operate and maintain a fish hatchery facility.
Developed, as part of a small group, a plan for the management of a hatchery population of a particular species
Appreciate how the biology and culture of different species influences hatchery management
Describe common problems in fish seed production and their management

3. Textbook (Title, Author, Publisher, Year of Publication, etc.)

1) Gary A. Wedemeyer (2002). Fish Hatchery Management. Second Edition. American Fisheries Society. 751pp.

2) Lucac, J.S. and Southgate, P.C. (2003). Aquaculture: Farming of Aquatic Animals and Plants. Blackwell Publishing, UK.

3) Niall R. Bromage, Ronald J. Roberts (1991). Broodstock Management and Egg and Larva quality. Wiley-Blackwell. 432pp.

4. Reference

1) Gary A. Wedemeyer (2002). Fish Hatchery Management. Second Edition. American Fisheries Society. 751pp.

2) Niall R. Bromage, Ronald J. Roberts (1991). Broodstock Management and Egg and Larva quality. Wiley-Blackwell. 432pp.

5. Course Requirements and Grades

examinations = 70
continous assessment test = 20
assignmment = 10

total = 100%

6. Course Calendar

Week	Main Content
1	breeding and genetic selection
2	genetic principles in aquaculture
3	broodstock management
4	egg quality and gamete preservation
5	fish seed production and their management
6	biotechnology tools in aquaculture
7	C.A.T.
8	fish hatcheries
9	Water supply, water storage and distribution
10	operation and maintenance of hatcheries
11	spawning and seed production
12	Transport of fish seeds and broodstock.
13	Broodstock management and hatchery production Summary
14	EXAMINATION