[A-3]COURSE SYLLABUS

1. Course Description (Approximately 100 words)

This course will be broken down into two parts; Fish farming engineering and fish farming legislation. Fish farming engineering (also referred to aquatic engineering) is a multidisciplinary field of engineering that aims to solve technical problems associated with farming aquatic vertebrates, invertebrates, and algae.[1] Common aquaculture systems requiring optimization and engineering include sea cages, ponds, and recirculating systems.[2] The design and management of these systems is based on their production goals and the economics of the farming operation.[3] Aquaculture technology is varied with design and development requiring knowledge of mechanical, biological and environmental systems along with material engineering and instrumentation. [4] Furthermore, engineering techniques often involve solutions borrowed from wastewater treatment, fisheries, and traditional agriculture. Aquacultural engineering has played a role in the expansion of the aquaculture industry, which now accounts for half of all seafood products consumed in the world. [5] To identify effective solutions the discipline is combined with both fish physiology and business economics.

2. Course Goals and Objectives (Approximately 100 words)

By the end of this course, students will be able to:

Apply the principles of appropriate site selection for the enhanced sustainability of aquaculture
Identify design, operational and management principles, and key systems essential for effective aquaculture production.
Conduct detailed process description and performance testing of different aquaculture systems/facilities in use worldwide.
Evaluate the requirements for the various aquaculture systems/facilities with Construction experts.
An overview of the history of legislation that affects aquatic and marine life.
Federal legislation and policy governing fisheries.
Comprehensive review of all policies and legislations that affect Marine life.

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

Aquaculture Technology: Fishfarming & Equipment, 2012 by Martin Hochleithner (Author)

Fish Farming - For Pleasure and Profit – November 4, 2008 by Anon (Author)

Becoming Salmon: Aquaculture and the Domestication of a Fish (California Studies in Food and Culture) – June 30, 2015 by Marianne Elisabeth Lien (Author)

4. Reference

Handbook of Small-Scale Freshwater Fish Farming (FAO Training Series), 1999 by Food and Agriculture Organization of the United Nations (Author)

5. Course Requirements and Grades

examinations = 70
continous assessment test = 20
assignmment = 10

total = 100%

6. Course Calendar

Week	Main Content
1	Handling, caring and breeding of fish
2	Management of fish seed, brooders and growers
3	Procurement of feeds and types of feeding system
4	PONDS
5	Fish diseases and their control
6	Fish diseases and their control CONTINUED
7	C.A.T.
8	surveying
9	Surveying Continued
10	Conservation Strategies
11	Ranching
12	Restoration/Mitigation Efforts
13	Summary and revision
14	EXAM