

# Aquaculture 317 Syllabus

## January 7 – 18, 2008

A 3 credit, Spring Semester Interim Course at the Haskin Shellfish Research Laboratory

### Instructors

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### Course Objectives

- 1) Introduce principles of aquaculture;
- 2) Examine major aquaculture species and culture practice worldwide;
- 3) Learn basic aquaculture practices and related techniques through laboratory exercises
- 4) Understand environmental impacts of aquaculture

### Topics and Tentative Schedule

1/7	Introduction to Aquaculture/Basic Requirements
1/8	Asian Aquaculture/Seaweeds
1/9	Shellfish Culture
1/10	Nutrition and Growth/Crustacean Aquaculture
1/11	Disease/Genetics
1/14	Major Finfish/Striped Bass
1/15	Intensive culture of Tilapia
1/16	Koi Aquaculture/Aquarium Trade
1/17	Sanitation/Aquaculture Economics
1/18	Review/Prep Lab Reports/Final Exam

### Field Trips

1/9	Cape Shore Oyster Hatchery and Oyster Farm/Rutgers MADF
1/15	Tilapia farm at Cumberland County Community College
1/16	Koi farm in Salem, NJ – Quality Koi
1/17	Clam Processing Plant and Oyster Packing House

### Readings and Discussion Topics

- Worldwide Aquaculture as an Industry
- GMOs and Biotechnology in Aquaculture
- Aquaculture and the Environment
- Non-native Species

### Laboratory Projects

1. Finfish culture: rear tilapia under different conditions, monitor water chemistry
2. Shellfish culture: spawn and rearing bivalve and phytoplankton as food
3. Disease diagnostics: gross pathology, histology, RFTM assay, condition index
4. Genetic analysis: PCR-diagnostic tools.

### Textbook

None. Reading material and reference books are provided.

### Fees

\$175 per student to cover dorm (\$150) and other expenses (\$25).

### Evaluation

Participation and Discussion	10%
Lab Reports, quizzes, worksheets	25%
Final Exam	40%
Term-paper, due 3/14/08	25%