

Aquaculture 317 Syllabus Spring 2023 January 2-13, 2023

A 3 credit, Spring Semester Interim Course at the Haskin Shellfish Research Laboratory
Class meets daily from 8 am to 5 pm for the entire period

Instructors

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Course Objectives

- 1) Introduce principles of aquaculture
- 2) Examine major aquaculture species and culture practices worldwide
- 3) Learn basic aquaculture practices and related techniques through laboratory exercises
- 4) Develop basic understanding of aquaculture regulation, economics and environmental impacts

Topics

- Introduction to Aquaculture/Basic Requirements
- US Aquaculture/Global Aquaculture/Asian Aquaculture
- Seaweeds & Phytoplankton Culture
- Molluscan Shellfish Culture/Clam and Oyster culture
- Crustacean/shrimp/crayfish Aquaculture
- Major Finfish Species/Intensive culture of Tilapia
- Non-food production – Pets/Health/Research/Restoration/Fashion
- Nutrition and Growth/Disease/Genetics
- Regulation/Sanitation/Environmental Impacts
- Aquaculture Economics and Engineering

Field Trips

- Rutgers Aquaculture Innovation Center, Cape Shore Oyster Hatchery, and an active Oyster Farm
- An active koi farm
- Harvest processing facilities

Readings and Discussion Topics

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

Laboratory Projects and Hands-on Training

1. Basic construction and maintenance of systems
2. Biological filtration in recirculating systems
3. Shellfish and/or finfish culture: spawn and/or raise animals and planktonic food
4. Disease diagnostics: gross pathology, histology, RFTM assay, pcr

Textbook: None. Reading material and reference books are provided.

Fees: \$200 per student to cover dorm (\$150), field trips, and other course expenses (\$50).

Evaluation

Participation and Discussion	5%
Lab Reports, worksheets	30%
Final Exam	40%
Term-paper, due by April	25%