Aquaculture 317 Syllabus Spring 2020
January 6-17, 2020
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
Dr. Ximing Guo  Ph. 856-785-0074 x4324  e-mail: xguo@hsrl.rutgers.edu
Dr. David Bushek  Ph. 856-785-0074 x4327  e-mail: bushek@hsrl.rutgers.edu
Zhenwei Wang  Ph. 856-785-0074 x4340  e-mail: zw233@hsrl.rutgers.edu
Sarah Borsetti  Ph. 856-785-0074 x4334  e-mail: sarabor@rutgers.edu

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
• Koi Aquaculture/Aquarium Trade
• Nutrition and Growth/Disease/Genetics
• Regulation/Sanitation/Aquaculture Economics

Field Trips
• Rutgers Aquaculture Innovation Center, Cape Shore Oyster Hatchery, and an active Oyster Farm
• An active koi farm and a bait fish farm
• Shellfish packing/shucking houses

Readings and Discussion Topics
• Worldwide Aquaculture as an Industry
• GMOs and Biotechnology in Aquaculture
• Aquaculture and the Environment
• Non-native Species

Laboratory Projects
1. Recirculating systems: general construction and maintenance
2. Shellfish and/or finfish culture: spawn and/or raise animals and planktonic food
3. Disease diagnostics: gross pathology, histology, RFTM assay, condition index

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%