

Course Syllabus

Department: Environmental Conservation

Date: October 24, 2012

I. Course Prefix and Number: CON 218

Course Name: Fish Culture Techniques

Credit Hours and Contact Hours: 3 credit hours and 3 contact hours

Catalog Description including pre- and co-requisites: *supporting data required for grade prerequisite of 'C' or higher.*

This course is designed to provide students an in depth exposure to fish culture practices and techniques. Students will review historic and current status of fish culture in the U.S and world. Culture methods, data collection, egg take, incubation, and fry hatching of walleye (*Sander vitreus*) cultured at the FLCC-Muller Field Station- Education and Research Center is emphasized. Trips to other culture facilities add to the student experience. Essential factors involving water quality, fish health, nutrition, species requirements, system design, equipment, and advanced re-circulation aquaculture systems are studied. This is a hands-on course.

Relationship to Academic Programs and Curriculum including SUNY Gen Ed designation if applicable:

This course may be used as an elective for any of the Conservation degrees or a general elective for other degrees.

II. Course Student Learning Outcomes: *State the student learning outcome(s) for the course (e.g. Student will be able to identify...)*

Students will:

- Describe cold, cool, and warm water forms of fish culture
- Compare and contrast the components of NYSDEC fish hatcheries
- Demonstrate the ability to intensively propagate walleye
- Demonstrate the ability to extensively propagate walleye
- Provide demonstrations of walleye propagation to the public

College Learning Outcomes Addressed by the Course: *(check each College Learning Outcome addressed by the Student Learning Outcomes)*

- | | |
|--|--|
| <input type="checkbox"/> writing | <input type="checkbox"/> computer literacy |
| <input type="checkbox"/> oral communications | X ethics/values |
| <input type="checkbox"/> reading | X citizenship |
| X mathematics | <input type="checkbox"/> global concerns |
| <input type="checkbox"/> critical thinking | <input type="checkbox"/> information resources |

III. Assessment Measures (Summarize how the college and student learning outcomes will be assessed): *For each identified outcome checked, please provide the specific assessment measure.*

List identified College Learning Outcomes(s)	Specific assessment measure(s)
Mathematics	Students must use arithmetic to estimate the number of eggs collected and treatment concentrations as part of their egg rearing project.
Ethics/Values	Students will be handling live specimens in accordance to accepted protocols.
Citizenship	Students will be providing educational demonstrations to school groups and the public

IV. Instructional Materials and Methods

Types of Course Materials:

Text book, handouts and lab equipment

Methods of Instruction (e.g. Lecture, Lab, Seminar ...):

Lecture, capture, handling and spawning of live specimens, and field trips to other facilities

V. General Outline of Topics Covered:

1. Fish culture facilities
2. Cold water fish culture (e.g. salmonids)
3. Cool water fish culture (e.g. walleye)
4. Collection and care of broodstock
5. Egg development, incubation and hatching
6. Spawning of broodstock
7. Extensive culture of walleye
8. Warm water fish culture
9. Field trips to various fish culture facilities