BIOL 4545: Fisheries Management

A. COURSE DESCRIPTION

  Credits: 4
  Lecture Hours/Week: *.*
  Lab Hours/Week: *.*
  OJT Hours/Week: *.*
  Prerequisites: None
  Corequisites: None
  MnTC Goals: None

  Theory and methods of fisheries management with an emphasis on quantitative methods and ecosystem management. Lecture and extensive field and laboratory work. Prerequisites: BIOL 1211, BIOL 1212, BIOL 3362, and STAT 2610. BIOL 4534 strongly recommended.

B. COURSE EFFECTIVE DATES: 08/26/1997 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

  1. Introduction, Statistics SPSS & R- t-tests, ANOVA's, Regressions, Chi-square
  2. Collect fish, otolith extraction, aging (scales, otoliths, cleithra)
  3. Growth, food habits
  4. Collect fish
  5. Mortality
  6. Population estimates
  7. Fish health assessment
  8. Creel survey methods
  9. Fecundity, Recruitment, Production
 10. Spawner-recruit models, MSY, OSY, MEY, mortality caps
 11. Stock assessments
 12. Types of fisheries
 13. Culture techniques
 14. Management paradigms, Managing people
 15. Managing habitat and fish

D. LEARNING OUTCOMES (General)

  1. develop understanding and skills for assessing fish populations and stocks.
  2. develop understanding and skills for analyzing fisheries statistics, e.g., growth, mortality, fecundity, recruitment.
  3. develop general understanding and skills in managing fisheries.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

  None

F. LEARNER OUTCOMES ASSESSMENT

  As noted on course syllabus
G. SPECIAL INFORMATION

None noted