BIOL 4545: Fisheries Management

A. COURSE DESCRIPTION
   Credits: 4
   Lecture Hours/Week: *.*
   Lab Hours/Week: *.*
   OJT Hours/Week: *.*
   Prerequisites:
   This course requires both of these prerequisites
   BIOL 1211 - Introductory Biology I
   BIOL 1212 - Introductory Biology II
   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