

# Bemidji State University

## 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 3361 - Limnology

BIOL 3362 - Streams and Rivers

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 3361 and BIOL 3362, or consent of instructor.

**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