Bemidji State University

BIOL 4534: Ichthyology

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

An overview of morphology, physiology, behavior, taxonomy, systematics, and ecology of fishes. This course emphasizes the evolution of ecological adaptations and the origin and conservation of biodiversity. Lecture, laboratory, and field work. Prerequisites: BIOL 1211 and BIOL 1212.

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

C. OUTLINE OF MAJOR CONTENT AREAS

1. Alimentary System
2. Cardiovascular System
3. Conservation of Fishes
4. Early Life History
5. Endangered Species
6. Fish Anatomy, Morphometrics, Aging, and Necropsy
7. Fish ID: Cstostomidae & Ictaluridae
8. Fish ID: Cyprinidae
9. Fish ID: Petromyzontidae through Clupeidae
10. Fish Parasites
11. Fish Social Structure & Behavior
12. Functional Morphology
13. History & Phylogeny of Fishes
14. History of Ichthyology
15. Homeostasis
16. Homeostatsis
17. Juvenils, Adults, Age & Growth
18. Minnesota Fishes Life History
19. Minnesota Fishes
20. Muscular System
21. Nervous/Reproductive Systems
22. Osmoregulation
23. Respiration
24. Rules of Zoolotical Nomeclature
25. Seining
26. Skeletal Systems, Skin & Scales
27. Soft-Rayed Telosts
28. Spiny-Rayed Telosts
29. Systematics Procedures

D. LEARNING OUTCOMES (General)

1. learn to identify fishes using keys.
2. learn the anatomy, taxonomy, systematics, evolution, biogeography, ecology, physiology and behavior of fishes.
3. learn to identify most Minnesota species and eastern North American genera of fishes on sight.
4. learn to identify all families of North American freshwater fishes.
5. learn methods of collecting and preserving fishes.

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

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted