

# Minnesota State University Moorhead

## BIOL 348: Evolutionary Biology

### A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 3

Lab Hours/Week: 0

OJT Hours/Week: \*.\*

Prerequisites:

BIOL 341 - Genetics AND BIOL 115 - Organismal Biology AND BIOL 345 - Principles of Ecology

Corequisites: None

MnTC Goals: None

Concepts, principles and evidence of evolutionary processes in biological systems.

**B. COURSE EFFECTIVE DATES:** 05/10/2004 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. Science, misconceptions and issues in teaching evolution
2. History of evolutionary thought
3. Evidence for evolution
4. Natural selection
5. Reconstruction evolutionary trees, phylogenetics
6. Population genetics, Hardy-Weinberg, selection, mutation, migration, drift, inbreeding
7. Quantitative genetics
8. Adaptation
9. Sexual selection
10. Kin selection
11. Speciation
12. Human evolution

### D. LEARNING OUTCOMES (General)

1. Students will understand the relevance of evolution outside of textbooks, the fact of evolution and that natural selection is an observable process.
2. Students will be introduced to the underpinnings of evolutionary biology by studying mechanisms of evolutionary change, methods for studying adaptation, inferring phylogenies, and analyzing speciation.

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

None

### F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

### G. SPECIAL INFORMATION

None noted