# 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 115 and BIOL 341 and BIOL 345

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

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