

Washtenaw Community College Comprehensive Report

BIO 107 Introduction to Field Biology Effective Term: Winter 2024

Course Cover

College: Math, Science and Engineering Tech

Division: Math, Science and Engineering Tech

Department: Life Sciences

Discipline: Biology

Course Number: 107

Org Number: 12110

Full Course Title: Introduction to Field Biology

Transcript Title: Introduction to Field Biology

Is Consultation with other department(s) required: No

Publish in the Following: College Catalog , Time Schedule , Web Page

Reason for Submission: Three Year Review / Assessment Report

Change Information:

Consultation with all departments affected by this course is required.

Rationale: This course is being reviewed and updated due to a recent course assessment. No changes have been made to the master syllabus.

Proposed Start Semester: Winter 2024

Course Description: This course is an introduction to the field study of biological systems and biodiversity. Students will explore the techniques and complexities of studying Michigan organisms and ecosystems in an outdoor setting. Topics will include wetland and river habitats, native trees, shrubs and wild flowers, fungi, animal diversity, and ecology. Several off-campus trips will enhance the field experience in addition to exploring the natural areas on campus. As part of this course, students will keep a semester-long field journal on a specific natural area of study.

Course Credit Hours

Variable hours: No

Credits: 3

Lecture Hours: Instructor: 45 Student: 45

Lab: Instructor: 0 Student: 0

Clinical: Instructor: 0 Student: 0

Total Contact Hours: Instructor: 45 Student: 45

Repeatable for Credit: NO

Grading Methods: Letter Grades

Audit

Are lectures, labs, or clinicals offered as separate sections?: NO (same sections)

College-Level Reading and Writing

College-level Reading & Writing

College-Level Math

Requisites

General Education

MACRAO

MACRAO Science & Math

General Education Area 4 - Natural Science

Assoc in Applied Sci - Area 4

Assoc in Science - Area 4

Assoc in Arts - Area 4

Michigan Transfer Agreement - MTA

MTA Science (no lab)

Request Course Transfer**Proposed For:**

Eastern Michigan University

Ferris State University

Grand Valley State University

Jackson Community College

Michigan State University

Oakland University

University of Michigan

Wayne State University

Western Michigan University

Student Learning Outcomes

1. Identify fungi, plant, and animal species common to specific Michigan habitats.

Assessment 1

Assessment Tool: Outcome-related exam questions

Assessment Date: Fall 2025

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All students

How the assessment will be scored: Answer key

Standard of success to be used for this assessment: 70% of students will score a 70% or higher on outcome-related exam questions.

Who will score and analyze the data: Departmental faculty

2. Discuss the biodiversity, ecology, and importance of terrestrial and aquatic ecosystems commonly found in Michigan.

Assessment 1

Assessment Tool: Outcome-related essay questions on final exam

Assessment Date: Fall 2025

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All students

How the assessment will be scored: Departmentally-developed rubric

Standard of success to be used for this assessment: 70% of students will score a 70% or better on outcome-related exam questions.

Who will score and analyze the data: Departmental faculty

3. Compare and contrast the seasonal changes (both biotic and abiotic) of a specified natural area of study throughout the course of the semester.

Assessment 1

Assessment Tool: Journal entries

Assessment Date: Fall 2025

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All students

How the assessment will be scored: Departmentally-developed rubric

Standard of success to be used for this assessment: 70% of students will score a 70% or higher on their final field journal.

Who will score and analyze the data: Departmental faculty

Course Objectives

1. Identify native, non-native, and invasive wildflowers in several Michigan habitats.
2. Identify common insect and invertebrate species of animals found in various Michigan habitats.
3. Identify common aquatic animals (both invertebrate and vertebrate) found in Michigan ponds, rivers, vernal pools, and lakes.
4. Identify, compare and contrast several outdoor communities in Michigan including wetlands, ponds, rivers, fields, and forests.
5. Identify common vertebrate species of fishes, amphibians, reptiles, birds, and mammals found in Michigan.
6. Identify common fungal species found in Michigan forests.
7. Define ecological terms relevant to a specific organism or ecological system.
8. Identify several species of woody shrubs and trees common to Michigan.
9. Discuss the ecology of riparian ecosystems in relation to both biotic and abiotic factors.
10. Explain the importance of Michigan's geological past in relation to watersheds and riparian habitats.
11. Label the regions of a pond's edge in relation to plant types.
12. Compare and contrast the thermoregulatory physiology of ectotherms vs. endotherms.
13. Describe the migratory physiology, ecology, and routes (flyways) of migratory birds.
14. Differentiate the structure and ecological role of fungi vs. plants.
15. Identify several different types of mammal tracks native to Michigan and associated scat.
16. Analyze the information obtained from animal tracks, scat, browse lines, runs, scrapes, and skeletal remains.
17. Discuss the ecological relationships of fungi, animals, and plant communities within a forest food web.
18. Compare and contrast the biology of amphibians and reptiles in relation to body integument and reproduction.
19. Differentiate between poisonous vs. venomous organisms.
20. Discuss the physiology and ecology of different types of insect metamorphosis.
21. Identify environmental indicator species and discuss their importance in ecology.
22. Describe the differences in structure, photosynthesis, and seasonal ecology between gymnosperms and angiosperms.
23. Create and keep a semester-long field journal based on the seasonal changes (both abiotic and biotic) of a selected natural area.

New Resources for Course

Course Textbooks/Resources

Textbooks

Manuals

Periodicals

Software

Equipment/Facilities

Level III classroom

Off-Campus Sites

Reviewer

Action

Date

Faculty Preparer:

<i>David Wooten</i>	<i>Faculty Preparer</i>	<i>Jun 26, 2023</i>
Department Chair/Area Director:		
<i>Susan Dentel</i>	<i>Recommend Approval</i>	<i>Jul 07, 2023</i>
Dean:		
<i>Tracy Schwab</i>	<i>Recommend Approval</i>	<i>Jul 12, 2023</i>
Curriculum Committee Chair:		
<i>Randy Van Wagnen</i>	<i>Recommend Approval</i>	<i>Dec 29, 2023</i>
Assessment Committee Chair:		
<i>Jessica Hale</i>	<i>Recommend Approval</i>	<i>Jan 04, 2024</i>
Vice President for Instruction:		
<i>Brandon Tucker</i>	<i>Approve</i>	<i>Jan 05, 2024</i>

Washtenaw Community College Comprehensive Report

BIO 107 Introduction to Field Biology Effective Term: Winter 2018

Course Cover

Division: Math, Science and Engineering Tech

Department: Life Sciences

Discipline: Biology

Course Number: 107

Org Number: 12110

Full Course Title: Introduction to Field Biology

Transcript Title: Introduction to Field Biology

Is Consultation with other department(s) required: No

Publish in the Following: College Catalog , Time Schedule , Web Page

Reason for Submission: Three Year Review / Assessment Report

Change Information:

Consultation with all departments affected by this course is required.

Course description

Outcomes/Assessment

Objectives/Evaluation

Rationale: This course has not been assessed in several years and the master syllabus did not reflect the current, established course content or assessment tools. Changes made in the revised master syllabus will be used for assessment and submitted in the forthcoming CAR.

Proposed Start Semester: Winter 2018

Course Description: This course is an introduction to the field study of biological systems and biodiversity. Students will explore the techniques and complexities of studying Michigan organisms and ecosystems in an outdoor setting. Topics will include wetland and river habitats, native trees, shrubs and wild flowers, fungi, animal diversity, and ecology. Several off-campus trips will enhance the field experience in addition to exploring the natural areas on campus. As part of this course, students will keep a semester-long field journal on a specific natural area of study.

Course Credit Hours

Variable hours: No

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Assoc in Applied Sci - Area 4

Assoc in Science - Area 4

Assoc in Arts - Area 4

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MTA Science (no lab)

Request Course Transfer

Proposed For:

Central Michigan University
Eastern Michigan University
Ferris State University
Grand Valley State University
Jackson Community College
Michigan State University
Oakland University
University of Michigan
Wayne State University
Western Michigan University

Student Learning Outcomes

1. Identify fungi, plant, and animal species common to specific Michigan habitats.

Assessment 1

Assessment Tool: Exam questions

Assessment Date: Fall 2017

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All students

How the assessment will be scored: Answer key

Standard of success to be used for this assessment: 70% of students will score a 70% or higher on related exam questions.

Who will score and analyze the data: Departmental Faculty

2. Discuss the biodiversity, ecology, and importance of terrestrial and aquatic ecosystems commonly found in Michigan.

Assessment 1

Assessment Tool: Essay questions on final exam.

Assessment Date: Fall 2017

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All students

How the assessment will be scored: Departmentally developed rubric

Standard of success to be used for this assessment: 70% of students will score a 70% or better on related exam questions.

Who will score and analyze the data: Departmental Faculty

3. Compare and contrast the seasonal changes (both biotic and abiotic) of a specified natural area of study throughout the course of the semester.

Assessment 1

Assessment Tool: Journal entries

Assessment Date: Fall 2017

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All students

How the assessment will be scored: Departmentally developed rubric

Standard of success to be used for this assessment: 70% of students will score a 70% or higher on their final field journal grade.

Who will score and analyze the data: Departmental faculty

Course Objectives

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New Resources for Course

Course Textbooks/Resources

Textbooks
Manuals
Periodicals
Software

Equipment/Facilities

Level III classroom
Off-Campus Sites

<u>Reviewer</u>	<u>Action</u>	<u>Date</u>
Faculty Preparer: <i>David Wooten</i>	<i>Faculty Preparer</i>	<i>May 19, 2017</i>
Department Chair/Area Director: <i>Anne Heise</i>	<i>Recommend Approval</i>	<i>May 22, 2017</i>
Dean: <i>Kristin Good</i>	<i>Recommend Approval</i>	<i>May 30, 2017</i>
Curriculum Committee Chair: <i>Lisa Veasey</i>	<i>Recommend Approval</i>	<i>Aug 31, 2017</i>
Assessment Committee Chair: <i>Michelle Garey</i>	<i>Recommend Approval</i>	<i>Sep 06, 2017</i>
Vice President for Instruction: <i>Kimberly Hurns</i>	<i>Approve</i>	<i>Sep 07, 2017</i>