

Tompkins Cortland Community College

Master Course Syllabus

Course Discipline and Number: BIOL 115

Year: 2024-2025

Course Title: Field Natural History

Credit Hours: 3

I. Course Description: This course is an introduction to the study of local biodiversity. Emphasis is placed upon identification of organisms in the field and development of an understanding of their ecological relationships. Most class meetings will be at off-campus field sites. On-site modes of travel may include walking, bicycling, snow shoeing, canoeing, and horse-drawn wagon. Substantial outside preparation for the laboratories may be required. This will include the planning, implementation, and presentation of an independent field-based student research project. BIOL 115 fulfills the SUNY General Education requirement in Natural Sciences. Prerequisites: Prior completion of, or concurrent enrollment in, ENGL 100. 3 Cr. (2 Lec. 2 Lab.) Fall semester.

II. Additional Course Information:

1. Students may take this course to fulfill a TC3 program requirement for a laboratory science course. This course fulfills the SUNY General Education Natural Sciences requirement.
2. This course consists of at least 200 minutes of class per week for a fifteen-week semester.
3. Students are responsible for their own transportation to off-campus sites.

III. Student Learning Outcomes

Upon successful completion of this course, students will be able to:

1. Identify common wild plants (non-seed plants, wildflowers, and trees) and animals (insects, amphibians, reptiles, birds, and mammals) encountered in local field, forest, and aquatic ecosystems.
2. Use field guides and dichotomous keys to identify unfamiliar organisms.
3. Prepare traditional or photographic collections of specimens useful for future reference.
4. Keep a field journal.
5. Investigate the biology, ecology, and taxonomy of organisms of interest and describe and explain characteristics of local ecosystems.

IV. Tompkins Cortland General Education & SUNY Competency Goals

☒ **Critical thinking (Tompkins Cortland GE Goal; SUNY Competency)**

Students will conduct inquiry-based studies examining basic ecological interactions. This will require basic review of relevant supporting resources and the analysis of quantitative data.

☒ **Social/Global Awareness**

The class will host a number of professionals representing the following relevant disciplines: geology, ornithology, wildlife biology, forestry, paleontology, entomology, sustainable practices, outdoor recreation, and politics. They will visit protected areas and discuss the need for ecosystem protection. The class will discuss why natural areas become

degraded and endangered. Students will write a paper about organizations that protect ecosystems at the local, state, or national level.

☒ **Information Management**

Information about the organisms studied is obtained from print and web resources. The Field Journal allows the student to summarize information about approximately 250 species of organisms identified during the class.

V. Essential Topics/Themes

1. 1. Basic population, community, and ecosystem ecology
2. 2. Use of field guides and dichotomous keys
3. 3. Use of field and lab equipment to aid in sampling and identification
4. Watershed and soil management
5. Management of non-native and invasive species
6. 6. Use of simple ecological tests and measurements
7. 7. Visual identification of flora and fauna of central New York
8. Career awareness

VI. Methods of Assessment/Evaluation

Method	% Course Grade
1. Field identification quizzes	20-30%
2. Exams	20-30%
3. Attendance and participation	20-30%
4. Research project and presentation	20-30%

VII. Texts – ☒ Required ☐ Recommended ☐ Used for more than one course (list courses)

1. <i>Peterson First Guide to Birds of North America</i> . Peterson, Roger. 2 nd ed., 1998, Houghton Mifflin Harcourt. ISBN 978-0395406847
2. <i>Peterson First Guide to Trees of North America</i> . Petrides, G. A. 2 nd ed., 1998, Houghton Mifflin Harcourt. ISBN 978-0395911839
3. <i>Peterson First Guide to Reptiles and Amphibians of North America</i> . Peterson, Roger. 1 st ed., 1999, Houghton Mifflin Harcourt. ISBN 978-0395971956
4. <i>Peterson First Guide to Wildflowers of Northeastern and North-central North America</i> . Peterson, Roger. 2 nd ed., 1998, Houghton Mifflin Harcourt. ISBN 978-0395906675

Editions listed are current as of date of syllabus. More recent editions may be used

IX. Other Learning Resources

Audiovisual: Audio collections of birds, anurans (tailless amphibians), and insects are excellent tools for extending students' field observation skills.

Electronic: None specified

Other: None specified

Attendance Policy: *To maintain good grades, regular attendance in class is necessary. Absence from class is considered a serious matter and absence never excuses a student from class work. It is the responsibility of all instructors to distribute reasonable attendance policies in writing during the first week of class. Students are required to comply with the attendance policy set by each of their instructors. Students are not penalized if they are unable to attend classes or participate in exams on particular days because of religious beliefs, in accordance with Chapter 161, Section 224-a of the Education Law of the State of New York. Students who plan to be absent from classroom activity for religious reasons should discuss the absence in advance with their instructors. See college catalog for more information.*

Services for Students with Disabilities: *It is the College's policy to provide, on an individual basis, appropriate academic adjustments for students with disabilities, which may affect their ability to fully participate in program or course activities or to meet course requirements. Students with disabilities should contact the Coordinator of Access and Equity Services, to discuss their particular need for academic adjustments. All course materials are available in alternate formats upon request.*

Academic Integrity: *Every student at Tompkins Cortland Community College is expected to act in an academically honest fashion in all aspects of his or her academic work: in writing papers and reports, in taking examinations, in performing laboratory experiments and reporting the results, in clinical and cooperative learning experiences, and in attending to paperwork such as registration forms.*

Any written work submitted by a student must be his or her own. If the student uses the words or ideas of someone else, he or she must cite the source by such means as a footnote. Our guiding principle is that any honest evaluation of a student's performance must be based on that student's work. Any action taken by a student that would result in misrepresentation of someone else's work or actions as the student's own — such as cheating on a test, submitting for credit a paper written by another person, or forging an advisor's signature — is intellectually dishonest and deserving of censure.

Several degree programs offer student learning opportunities (such as internships, field work, and clinical experiences) outside the standard classroom setting. As part of the learning process, students must understand and engage in conduct that adheres to principles guiding employment within the professional workplace. These behaviors include, but are not limited to, academic integrity, accountability, reliability, respect, use of appropriate language and dress, civility, professional ethics, honesty, and trustworthiness. Disciplinary action may be initiated for inappropriate conduct occurring while participating in any course-related project or event.