Field Biology (BIO 310/510)
Department of Biological Sciences
State University of New York at Cortland

Course Information:
Credit Hours: 3
Semester/Year: August 1-23
Location: Outdoor Education Center
Required Texts: ???

Instructor Information:
Instructors: Drs. Steven B. Broyles & R. Lawrence Klotz
Phone: 607.753.2901
Office: Casino & Cedars Cabin
Office Hours: Mon. through Sat. 8 A.M.-9 P.M.

I will probably provide links to chapters that I have written.

Course Description: Examination of biological diversity and ecology in terrestrial and aquatic communities of New York. This course is taught during August at Cortland’s Outdoor Education Center in Adirondack State Park. Daily and evening classes include field trips, laboratories, and lectures. Students are assessed a fee for room and board. Required of biology majors in programs for adolescence education in biology and may be used as an elective for BIO and CON majors. Prerequisites: BIO 110-111 or BIO 201-202. Required of biology majors in programs for adolescence education in biology and may be used as an elective for BIO and CON majors.

Goals/Objectives of the Course: This course will introduce students to the major components of biotic communities in the Northeastern United States. Field Biology is designed with the intention of exposing students in Adolescence Biology Education and Environmental Science to many areas of field studies. Students will demonstrate taxonomic knowledge of land plants, algae, amphibians, fungi, insects, and birds. Students will develop a conceptual understanding of ecological processes, organism biology, biological interactions, and natural history through intensive field study and experimentation. Students will design, perform, and interpret projects on the Adirondack biota.

Evaluation and Grading: Students will be graded on two half-day examinations, and ???. Exams usually include short answer and essay questions, but may also include identifications from projection slides, preserved specimens, and living specimens. Fair exam material includes reading assignments. Questions regarding possible grading errors should be discussed as soon as possible with the instructor.

Biology Content Portfolio Assignments. Students enrolled in the science education program must submit the following exercises to their Biology Content Portfolio. Unsatisfactory assignments (C- or lower) must be revised until a satisfactory grade is achieved.

1. Glaciation, Palynology, Community Migration and Climate Change. The type written assignment must include data tables, figures, and interpretation/discussion of the exercise. (Content Standard 1.B.2. Earth Science)

2. Avian Vocalizations and Spectrographic Analysis. Students must submit a typewritten analysis of five different avian songs and a visual spectrograph. (Content Standard 1.B.3. Physical Science)

3. Field Project Report. This report must be submitted to the Content Portfolio after a satisfactory grade is achieved. See Project Report Rubric attached to the syllabus. (Content Standard 1.C. Investigations and Reports)

4. Mathematical and statistical analyses. Assignments that may be submitted from Field Biology include community diversity statistics and interpretations, nectar analysis and hummingbird foraging dynamics, estimates of insect population numbers. (Content Standard 1. D. Biological Exercises using Mathematics)

If you are a student with a disability and wish to request accommodations, please contact the office of Student Disability Services in B-1 Van Hoesen Hall or call 607.753.2066 for an appointment. Information regarding your disability will be treated in a confidential manner. Because many accommodations require early planning, requests for accommodations should be made as early as possible.
Specific Assignments and Grades

Broyles Exam 1-Sunday, August
100 points
This exam will include conceptual and identification questions on Adirondack forest ecology, bog ecology, hummingbird foraging dynamics, insect diversity, avian recordings, and pollination biology. Students will also be expected to assimilate information, describe data, and draw conclusions for experiments conducted during the first week.

Broyles Written Report
100 points

Klotz Exam -Wednesday, August 8
100 points

Other Grade Ideas: These are from the past and will be deleted unless you want them for ideas. I would like the students to write at least one report. I feel this is an important aspect of data collection and analysis, but I am open to your thoughts and discussions on this issue. I really don’t like having to grade reports, but will do so.

Data Collection & Analysis; Participation;
Digital Photography; Taxonomic Keys; Whiteface Movies, etc

Journal and Project Notebook

Field Project and Report

Grades: A+ 97.5-100%.  B+ 87.5-89.9%  C+ 77.5-79.9%  D+ 67.5-69.9%
 A  92.6-97.4%  B  82.6-87.4%  C  72.6-77.4%  D  62.6-67.4%
 A-  90.0-92.5%  B-  80.0-82.5%  C-  70.0-72.5%  D-  60.0-62.5%

Course Attendance Policy: Due to the on-site location of the course, ALL CLASSES, FIELD TRIPS, and MEALS ARE MANDATORY. Classes generally run form 9:00 to 11:30 A.M.; 1:00-5:00 P.M.; and 7:30-9:00 P.M. Monday through Saturday. Any foreseen absence should be brought to the attention of the instructor in advance of arriving at Raquette Lake. Please be on time for lectures and scheduled field trips.

Safety & Responsible Behaviors: The opportunity to participate in Field Biology at the Outdoor Education Center presents a number of unique responsibilities to you as a student. The staff and faculty expect that you will practice safe and responsible behaviors while at the facility, on field trips, and on your independent travels in and around the Raquette Lake Region during the course. You may be asked to leave the course and forfeit your right to a passing grade if you conduct yourself in manners that are viewed as unsafe to you or others or disrespectful of the educational philosophy of The Outdoor Education Center and SUNY Cortland. Examples of irresponsible behaviors include, but are not limited to, harassment or mishandling of wildlife, drug or alcohol abuse, destruction of property or natural environments, disrespectful behavior to others, misuse of canoes, kayaks, and other water craft.
Field Biology (BIO 310)

Daily Schedule:

Week 1

Monday, 10 Aug

9:00-11:00  Check-in at Outdoor Education Facility
11:00 A. M.  Orientation
Noon  Lunch
1:00 P.M.  Canoe Tip Test
1:45-5:30 P.M.  Experiment Set-ups; Travel to Camp Huntington
Evening:  Owl Prowl; Bat Biology

Tuesday, 11 Aug

Routine meal schedule (8:00 A.M.; NOON; and 6:00 P.M.)
Early Morning:  Hummingbird Observations—Nectar Replacement
Morning:  Biodiversity of Adirondack Forests—Transect Set-up
Afternoon:  Biodiversity of Adirondack Forests & Sample Collection
Evening:  Data Analysis
Concepts:  Taxonomy, habitat/niche specialization; tree biology; carbon sequestration; water ecology

Wednesday, 12 August

Early-early morning:  Hunting for Bicknell’s Thrush—an ADK Endangered Species
Morning:  Avian Song Recording
Afternoon:  Wetland Biology:
Evening:  Ferd’s Bog
Concepts:  Glaciation; bog ecology; community migration & dispersal; chemical/physical attributes of wetlands; adaptation; economic services; dendrochronology; inquiline communities of pitcher plants

Thursday, 13 August

Morning:  Whiteface Mountain—Adirondack High Peak Biology
Afternoon:  Paul Smith’s Visitor’s Center
Evening:  Dinner in Lake Placid
Concepts:  Community Ecology on ADK Mountains; Forest stratification and diversity, community migration in response to climatic change, forest adaptation. Glaciation and land history.

Friday, 14 August

Morning:  Insect Biology
Afternoon:  Pollinator Fauna of Milkweeds-Capture-Mark-Recapture Spectrographic Analysis of Bird Song Examination of butterfly traps
Evening:  Of Monarchs and Milkweeds
Concepts:  Insect diversity & evolution; pollination biology; estimating population sizes; symbioses; avian vocal communication.

Saturday, 15 August

Morning :  Soil Macroinvertebrates
Afternoon:  Summary of Data from Forest Biodiversity
Evening:  Study Time

Sunday, 16 August

Morning:  Broyles Exam
Afternoon:  Free Time
Evening:  TBA
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Statement on Plagiarism & Academic Dishonesty. We expect that the materials submitted for grades in this course will be your own original work and not that of others. If you must quote material then please utilize quotation marks and citation of material in the text. I will provide you with information on appropriate format for literature cited in the text and on a literature cited page. Please don’t plagiarize material. Plagiarism is illegal and unprofessional. The following section was taken directly from the SUNY Cortland College Handbook. We will follow the appropriate college procedure for dealing with all forms of academic dishonesty.

“340.02 VIOLATION OF ACADEMIC INTEGRITY
A violation of academic integrity as an instance of academic dishonesty can occur in many ways. At SUNY Cortland, instances of academic dishonesty are:

1. Plagiarism
Students are expected to submit and present work that is their own with proper documentation and acknowledgment when the work of others is consulted and used. Plagiarism can be intentional by deliberately presenting the work of others as one’s own, or inadvertent by accidentally omitting or erroneously citing sources. Examples of plagiarism that can occur in research papers, lab reports, written reports, oral presentations as well as other assignments are:
A. Failure to use quotation marks: sources quoted directly must be shown with quotation marks in the body of the project and with the appropriate citation in the references, notes or footnotes
B. Undocumented paraphrasing: sources “put into one’s own words” must have the source cited properly in the body of the project and in references, notes or footnotes
C. Creating false documentation: purposefully presenting wrong information in references or citations or manufacturing false information used in references, notes and footnotes

2. Cheating on examinations
A. Looking and/or copying from another student’s paper during an examination or in-class assignment
B. Allowing another student to look or copy from one’s work during an examination or in-class assignment
C. Possessing crib sheets, answer sheets and other information during an examination or in-class assignment not authorized by the instructor
D. Writing an answer to an in-class examination or assignment and submitting it as written in class
E. Taking an examination for another student
F. Allowing or arranging for a second party to take an examination or other in-class assignment
G. Allowing one’s own work to be copied and submitted by another student
H. Altering or falsifying examination or assignment results after they have been evaluated by the instructor and returned

3. Other infractions
A. Possessing papers, assignments, examinations, reports, lab reports or other assignments that have not formally been released by the instructor
B. Purchasing a paper or assignment from an online source, paper mill, another student, or other source and submitting it, wholly or in part, as one’s own work
C. Possessing another student’s work without permission
D. Writing or creating a research paper, written report, lab report or other work for another student
E. Submitting the same work for two different classes without the approval by both faculty members teaching both classes
F. Falsifying College documents
G. Presenting false documents or forged documents
H. Destroying, vandalizing, altering and/or removing library materials without authorization
I. Falsifying data
J. Altering or falsifying another student’s data, laboratory work, research, assignments or written materials

All students enrolled at SUNY Cortland will be considered by the College to be dependent unless they have approved independent status on file with the Financial Aid Office or are at least 25 years of age. Any student who is already emancipated but has not declared her/his emancipation to the College prior to a disciplinary hearing will be given five school days after the hearing to do so. For more information on dependency status and emancipation, contact the Financial Aid Office.
C. Parental notification will consist of a copy of the decision letter sent to the student, a cover letter to the parents (and, at the discretion of the vice president for student affairs, any other written materials deemed informative).”