CONSERVATION BIOLOGY (BIOL 3550): Fall 2017

Instructor: Prof. David DesRochers (Office: Peeples 224)

Contact information: e-mail: ddesrochers@daltonstate.edu, Phone: 706-272-2165

Office hours: MW: 9–12, TR: 3–4, or by appointment

Class hours: Tues & Thurs: 10:50 a.m. – 12:05, Peeples Hall 115

Text: ESSENTIALS OF CONSERVATION BIOLOGY, 6th ed. (Primack) (5th ed. is okay)

Student Learning Outcomes:
Students will demonstrate an understanding of Conservation Biology through intensive lectures, seminars, and essays. Final assessment will be based on a semester long poster presentation of conservation management plant. The presentation will require intensive research outside of the normal class meetings and is intended to have the students build upon topics discussed in class.

1. Student must demonstrate an understanding of the biological aspects of environmental crises and how principles from major areas in biology can provide solutions to the conservation of species and ecosystems.
2. Students must demonstrate comprehension and be able to integrate focal ideas from population ecology and genetics, and community ecology.
3. Because of the interdisciplinary nature of conservation student will demonstrate understanding of how social and political issues influence the field of conservation biology.

Assessment of outcomes will be based upon

1. Degree of participation and preparedness
2. Response statements and discussions from reading primary literature
3. Performance on lecture exams (essay format)
4. Semester long project to develop a management plan to deal with an environmental problem

Course requirements & grading (785 possible points):

- Three essay exams (100 pts each) [there is NO final exam]
- Management Plan presentation (135 pts)
  - Topic must be approved by Sept 13 (5 pts)
    - A rough outline of your project also is due on Sept 13 (10 pts)
  - Part of grade determined partly by peer (your fellow students) evaluation (25 pts)
  - Part of grade determined by me (75 pts)
  - Literature cited section (minimum 5 primary sources) (20 pts)
- Evaluation of other students’ Management Plans presentation (20 pts) – your evaluations will be confidential to the students being evaluated
- Preliminary primary literature sources for Management Plan (20 pts). Due Sept. 18
  - Teams must submit 5 citations of primary literature sources. These are scientific papers that you have looked at for potential use for your plan. The citations must be in the format of the journal Conservation Biology. See the Management Plan instruction section below for more details on formatting your literature cited section. In the end, you may choose not to use them, and that’s okay. I want to see evidence that you are working towards your goals. You also may submit up to 3 additional literature sources. Each additional source will be worth 1 bonus points added to the total of this assignment. These additional resources may be primary literature or other science resources – no websites unless approved by me, and they must be formatted correctly to receive the bonus points. Additional citation resources are available at our class’ LibGuide (http://libguides.daltonstate.edu/conservation)
- Management Plan progress reports (10 pts each)
- Teams must submit a progress report of what they have so far accomplished. Each report should be a bulleted list of completed tasks – nothing fancy – just proof that you are progressing.

- **Writing Feedback (20 pts each)**
  
  - In addition, you will be submitting typed drafts of two of your plan components to help develop your writing skills. You will be required to upload the Introduction and Management Plan to Drop Box on GAView. Learning how to write in your own words is incredibly important. If your writing is flagged as 15% or more similar to the sources from which you are pulling information, then you only will earn 5 points at most, and I will expect you to resubmit a revised draft. See syllabus for due dates.

- **Scientific literature responses and small group discussions (50 pts each).** During the semester you will be assigned papers from the scientific literature to read before a particular lecture to be discussed in small groups (3–4 people). Due dates are on syllabus (and may change depending on where we are in lecture). You must read the paper before coming to class and everything you submit must be typed. At the start of class, you will hand in a ½ page statement of one thing that surprised you about the paper and why you were surprised. You must include a ½ page discussion about what you found challenging about the article. Also, what do you think is the next step the researchers could take with the results that they found? You also will bring to the discussion another sheet of paper with the objective/question from the article and five questions that you had. Asking what a word means is not an acceptable question. You can look up a word’s definition! At the end of class, you will score your participation in the group on a scale from 0–10. If you miss a discussion day, then you only will be able to earn at most 40 points depending on the quality of your late work. You will have until the next class meeting time to turn in your response if you miss a discussion day. Point break down:
  
  1. Surprise statement (10 pts)
  2. A ½ page discussion about what you found challenging about the article. Also, what do you think is the next step the researchers could take with the results that they found? (10 pts)
  3. Objective/question of study – in your own words; no copying and pasting! (10 pts)
  4. 5 questions you have about the study (10 pts)
  5. Self-assessment grade (0: not present, 2: poor, 4: okay, 6: adequate, 8: good, 10: excellent) (10 pts)

- **Professional Conduct & Participation (150 points):** Each day you will have an opportunity to earn 5 points. This is an all or nothing grade. To earn these points, you must be on time (5-minute grace period), attentive (no cell phone use), participate in group/class discussions, and be respectful of others. If you are unable to meet these tasks, you will lose the five-points for that day. Everyone will have two free days if they miss where they will not be penalized the points. We meet 30 times. So this conduct grade works out to 150 points! Keep that in mind. We will have many conversations this semester! Please participate. I understand that some people prefer to listen (I’m one of those people sometimes, so I feel your pain!). I encourage everyone to get involved and step out of your safety zone.

- **Extra Credit:** I do make extra credit available throughout the semester, but keep in mind that there are hundreds of regular points to earn. Anyone asking for extra credit, at any time, will activate a two-week period during which time no extra credit will be available.

**Final Grade Assignment:** 90–100%: A; 80–89%: B; 70–79%: C; 60–69%: D; <60%: F

**Notes about grading:**

- Exams will NOT be cumulative, EXCEPT when material is repeated.
- I grade on straight percentages.
- Make up exam policy: NO make-up exams (except in extraordinary & documented circumstances)
- Late works will not be accepted unless in emergencies and at my discretion.
- You must be present for end of semester presentations.
• If you have a question regarding how a question was graded on an exam, you need to submit in writing why you think your answer might be correct, along with your exam. This must be done within 7 days of my returning the exam to the class.

Attendance Policy:

Class: You are expected, but not required, to attend all class meetings – attendance is one of the keys to success since most of the material included on the exams comes from class lectures. If class is missed, you will be responsible for obtaining material, announcements, and assignments given in class.

Exams: Attendance is mandatory. Make-up examinations will be given only in extreme cases and only with notification (by email) on or before the day of your absence.

If classes are cancelled due to inclement weather, please complete the reading assignment for the date(s) that we miss class. Complete review questions at the end of the chapter(s), and check your e-mail for additional instructions. Make-up days may be required, so please be flexible.

Phones: I understand that your phone is important to you. It keeps you connected to family, friends, and the world around you. It provides knowledge, entertainment, artistic expression, and so on. It also can be a useful tool in class for photographing a slide, notes on the board, or scrolling through a lecture outline on GAView. If you want to use your phone for taking notes in class, then that is acceptable. However, if you use your phone for entertainment and social media, then I will ask you to put it away. No phones are allowed out during exams.

ETHICAL CONDUCT

Academic Dishonesty: Cheating and plagiarism are a part of the Dalton State Code of Student Conduct, which can be found in its most updated form at http://daltoncampuslife.com/student-conduct/. ANY assistance provided or given in any way toward work in a class constitutes cheating, unless such behavior is authorized by your instructor. Additionally, any use of the ideas or words of others should be noted, or this will constitute plagiarism. For more details on what Dalton State considers to be Academic Dishonesty, please review the Code of Student Conduct. Instructors will assign grades based on classroom performance. Additional sanctions may be provided as a learning experience from the Student Conduct process. Borrowing another students’ work or collaborating on an assignment not designated as collaborative is unacceptable. Furthermore, presenting work that was completed for another class, while not plagiarism technically, is not the same as presenting original work, and is therefore unacceptable.

Classroom Behavior: Dalton State is committed to respect via the Roadrunner Respect pledge. To learn more, please visit http://daltoncampuslife.com/roadrunner-respect/.

“I pledge to show my fellow Roadrunner students, faculty, staff, and administration respect by treating others the way they want to be treated and by thinking about others first before making decisions that might affect them.

OFFICIALLY APPROVED DSC GROUPS AND ACTIVITIES: (Effective Fall 2013)

When students are engaged in officially approved Dalton State groups or activities that require them to participate in events off campus during school days, they shall be treated similarly to any faculty or staff member acting in that same capacity. Thus, just as faculty and staff have excused absences from their regular work schedules, students shall be excused from class without penalty if they are off campus representing Dalton State College in an approved, official capacity during their regular class time. Examples include presenting a paper or otherwise participating in a conference, attending a University System student affairs event, participating in intercollegiate competition (athletic or academic), participating in an approved field trip, etc. Just as faculty and staff members are required to submit Request to Travel forms for approval, in order to be excused, the student needs to provide the following information to the instructor prior to the date when he/she will be absent from class:

• notification of the event (in the case of athletics, students should provide each instructor a schedule of away events at the beginning of the semester or as soon as possible after the schedule is available);
• estimated time of departure from and return to campus (for example, if a student has an away game in the evening and will not be leaving campus until 3:00, he/she will not be excused from classes prior to that time on that day;
similarly if the event is in the morning and the student will be returning to campus during the day, he/she is expected to attend any class scheduled after the return trip); and

- contact information for the person or organization sponsoring/authorizing the student’s participation in the event.

The student shall be allowed to make up any work missed during the time he/she is off campus representing DSC in an official capacity. He/she shall discuss what will be missed with the instructor and make arrangements to make up any assignments, tests, presentations, etc. that were scheduled on that date.

**DISABILITY SUPPORT SERVICES:**

*Students with disabilities or special needs are encouraged to contact Disability Access.* In order to make an appointment or to obtain information on the process for qualifying for accommodations, the student should visit the Disability Access Library Guide at [http://libguides.daltonstate.edu/c.php?g=24716&p=149663](http://libguides.daltonstate.edu/c.php?g=24716&p=149663) or contact the Disability Access office. Contact information: Andrea Roberson, Associate Director of Disability Access and Student Support Services Pope Student Center, upper level, Dean of Students Office 706-272-2524, aroberson@daltonstate.edu

For information regarding HB 280 (campus carry) please visit the following website: [http://www.usg.edu/hb280](http://www.usg.edu/hb280)
Title IX Information

4.1.7 Student Sexual Misconduct Policy
(Last Modified on August 9, 2017)

In accordance with Title IX of the Education Amendments of 1972 (“Title IX”), the University System of Georgia (USG) does not discriminate on the basis of sex in any of its education programs or activities or in employment. The USG is committed to ensuring a safe learning and working environment for all members of the USG community. To that end, this Policy prohibits sexual misconduct, as defined herein.

In order to reduce incidents of sexual misconduct, USG institutions are required to provide prevention tools and to conduct ongoing awareness and prevention programming and training for the campus community. Such programs will promote positive and healthy behaviors and educate the campus community on consent, sexual assault, alcohol use, dating violence, domestic violence, stalking, bystander intervention, and reporting.

When sexual misconduct does occur, all members of the USG community are strongly encouraged to report it promptly through the procedures outlined in this Policy. The purpose of this Policy is to ensure uniformity throughout the USG in reporting and addressing sexual misconduct.

How to Report
Please note that although you have the option to make a report anonymous, doing so may limit the College’s options for response. Call 911 if you are in an emergency situation

If you would like to report to a Police Agency:
Dalton State Public Safety
Health Professions Building- Upper Level
706-272-4461
Online Sexual Assault Report HERE

If you would like to report to Dalton State Administration:
DSC Online Reporting Form

Title IX Coordinator
Lori McCarty
Director of Human Resources
Phone: 706-272-2034
Email: l mccarty@daltonstate.edu

Deputy Title IX Coordinator
Bobby Whitehead
Assistant Director for Student Conduct
Phone: 706-272-2999
Email: bwhitehead@daltonstate.edu

If you would like to talk with someone confidentially:
The Counseling Center
Health Professions 266 (Inside Health Center)
Phone: 706-272-4430
Below is a tentative schedule:

<table>
<thead>
<tr>
<th>Date</th>
<th>Topics</th>
<th>Chapter</th>
<th>Scientific Lit. &amp; Notes</th>
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<tr>
<td>Aug. 16</td>
<td>What is Conservation Biology?</td>
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<td>What is Biodiversity</td>
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<td>Global patterns of biodiversity</td>
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<td>Sept 4</td>
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<td>Valuing biodiversity</td>
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<td>18</td>
<td>Extinction</td>
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<td>Literature Cited due</td>
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<td>25</td>
<td>Vulnerability to extinction</td>
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<td>1st Progress report due</td>
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<td>Oct 2</td>
<td>Habitat Loss &amp; Degradation, Climate Change</td>
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<td><strong>Fall Break</strong></td>
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<td>Overexploitation, Invasive Species, &amp; Disease</td>
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<td>Introduction due</td>
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<td>18</td>
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<td>2nd paper discussion</td>
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<td>Problems of small populations</td>
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<td>Applied population biology</td>
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<td>Management Plan due</td>
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<td>Nov 1</td>
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<td>Surveys &amp; monitoring</td>
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<td>Ex situ approaches</td>
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<td>20</td>
<td>Restoration ecology</td>
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<td>Wetland restoration fieldtrip</td>
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<td>Exam 3</td>
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<td>29</td>
<td><strong>Poster Presentations &amp; Evaluation</strong></td>
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<td>Dec 6</td>
<td><strong>Poster Presentations &amp; Evaluation</strong></td>
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<td>10:30 a.m. – 12:30 p.m.</td>
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Management Plan
Students will work in teams of two to prepare a management plan for a threatened or endangered species or ecosystem, or a plan to control an exotic species or emerging disease whose invasion is causing biodiversity problems. Over the course of the semester each team will prepare a poster to present their plan. Posters are one of the primary methods people in the scientific community communicate research results. Additionally, turn in a bibliography of materials used in developing your management plan. Citations in the bibliography should be almost exclusively from the primary scientific literature. If you do not know what constitutes primary literature, see me.

Proposed Management Plan topic must be cleared with me before you start work, and the latest you can clear a topic is Sept 13. Submit topics and/or come talk to me about possible topics AS SOON AS POSSIBLE to avoid being scooped – only one group per species / problem. Before you select a species/ecosystem you should do a literature search to make sure there is sufficient information to tackle the project.

Management plans already exist for many species or ecosystems – your selected project may not repeat an already proposed or completed project. If you select a species or ecosystem with an existing management plan, you need to (1) propose something that goes beyond the existing plan, (2) make it clear in your poster what is new and what is not, and (3) turn in a reference to the existing plan so I can see what you did that was different.

Posters will be on display on the dates listed in the syllabus; half the class will present and answer questions one day and evaluate the posters the other (the next day, roles will switch). All posters must be completed and brought in by the first presentation date (Nov. 29). Both members of each team will be expected to answer questions regarding management plans when people come to view the posters. Each student will formally evaluate 3 other groups’ posters in order to practice thinking critically and assessing others’ work and your evaluation will be graded. Your grade will be based on your doing a careful, constructive job of reviewing posters – if you say a poster is great when it is not, your evaluation grade will go down. Also, students will assign a grade to each poster they evaluate, and their grades will affect the poster’s final grade.
Some scientific journals that focus on Conservation Biology / Wildlife Management:

- Animal Conservation
- Biodiversity & Conservation
- Biological Conservation
- Bird Conservation & Ecology
- Conservation Biology
- Conservation Ecology (on line)
- Ecological Applications
- Journal of Applied Ecology
- Journal of Wildlife Management
- Landscape & Urban Planning
- Restoration Ecology
- Wildlife Society Bulletin

Some potentially useful Web sites for getting ideas. (There are tons of them of varying quality. These sites are NOT scientific literature, but they might lead you to some.)

- The World Conservation Union (IUCN) (www.iucn.org)
- US Fish & Wildlife Service (http://endangered.fws.gov/)
- EDGE (Zoological Society of London) (http://www.edgeofexistence.org/)
- Wilderness Network (http://www.wilderness.net/)
- The Society for Conservation Biology (http://conbio.org/)
- World Wildlife Fund (http://www.wwf.org/)
- Endangered Species Coalition (http://www.stopextinction.org/)

**Poster format**

**Abstract:** In 350 words or less, summarize your management plan. State the problem, why it is a problem, where it is a problem, and the major findings and recommendations of your management plan. No citations appear in the abstract.

**Introduction:** Introduce the general conservation/management problem, then narrow the focus of the introduction to your specific management problem. Give the location, interested parties (for many projects this will include who is in conflict), and state your specific goals for the project. By the end of the section a reader should know what you are doing and why.

**Background:** A brief review of the location and species involved. If your management plan focuses on a single species, give me a summary of its pertinent natural history, ecology, and behavior. If it is an ecosystem, tell me about the ecosystem (biome, primary species, etc).

**Proposed management plan:** This is the bulk of your project. What do you propose to do? What is your reasoning? Design your management plan as an experiment (= adaptive management). That is, you plan to do “x”, and you expect “y” to occur. This means you should state your plan as a hypothesis, or set of hypotheses, or predictions. Include predictions – what specifically should result from your management plan?

**Quantifying success:** How does your management plan address and solve the problem? What were you not able to deal with? Define “success“ for your management plan, and provide criteria for assessing success (or failure).

**Literature Cited:** To be handed in separately at time poster is displayed. All ideas, data, information not your own must be cited, unless they are ideas common in the literature (e.g., plants photosynthesize). All citations must come from the scientific literature. This includes scientific journals, symposia, and some government reports (but not all). When in
doubt, ask me. The literature cited section should contain all citations used, and no extras. Format for the literature cited section should follow the scientific journal Conservation Biology.

Citing Web pages: DO NOT, unless it is an on-line journal; then cite web page, journal number, and page numbers. The only acceptable use of other Web citations is if you want to document a popular interest in the topic.

PROOFREAD YOUR POSTER. I guarantee that if you wait to the last minute to do this project it will show in the quality of your work.

Lazy team members: If you believe your partner is not being productive, and you cannot get him/her to be productive, tell me.

*Poster tips*

Your goal for a poster is to distill the information for your management plan into short, clear paragraphs, illustrations, and/or tables in a space not exceeding 1 meter tall by 1.3 meters wide.

1. Everything should be easily readable from at least a meter away. Recommendations: title 72 pt; your names 40 pt; abstract 36 pt; headings 36 pt; text 32 pt. Arial font, bold.

2. Graphs, figures and tables can be pre-mounted on colored paper or poster board for ease in setting up your poster and to highlight the material. Each figure or table should be numbered and referred to in the text of the poster. Each should have a heading of one or more lines in large type (32 pt) that provides a brief (one or two lines) “take home” message.

3. Choose fonts that are easy to read, don’t overuse bold or italics. Background colors should draw attention to material, but not detract from presentation – avoid fluorescent colors.

4. Avoid unnecessary details in preparing figures, drawings or illustrations. Try to keep everything straightforward. If you are copying a figure and the font is too small, rewrite it!

5. Ideally, your poster should be self-explanatory so that you are free to supplement and discuss particular points raised by visitors.

6. If you use a picture or diagram from the Web or other sources, be sure to attribute it.

7. Arrange material in columns rather than in rows. It is easier for viewers to scan a poster by moving systematically down then across rather than zigzagging back and forth. Figures should be numbered, with matching reference in text. An abstract should be placed at the upper left. Make sure your names appear on the poster under the title.

8. Printing your poster: There are a number of ways of doing this. A number of print shops like Kinko’s Fed-Ex have printing services. Dalton Print Shop (Address: 118 W Cuyler St, Dalton, GA 30720, Phone: *(706) 226-1624* is also becoming pretty popular. Sometimes these services are expensive, so find a service that best meets your financial needs. I’ve seen some good, creative posters over the years that have not relied heavily on printing fancy posters. Make sure the quality science comes first and have it be aesthetically pleasing. Aesthetic tastes also differ from one person to the next. Don’t spend much time worrying about it.

9. For bonus points, e-mail me the names of the species (one point each) pictured in this document. Please don’t discuss your answers with classmates. Submissions must be sent by the last day of classes by 5 p.m.