



Conservation Biology

A Research Service Learning Course

Spring 2007 Syllabus



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Course description

Save the whales! Save the redwoods! Save the spotted owls! Rally cries such as these not only imply that biodiversity is in crisis, but that we should be doing something about it. We are currently in the midst of an extinction crisis destined to become as large and significant as the extinction event that ended the age of the dinosaurs. Thousands, if not millions, of species are predicted to go extinct within the next century. The difference is, this time humans are the cause. In the midst of this crisis, what is the role of conservation biologists? Are we simply documenting extinctions as they occur, or are we obligated to attempt to reverse the trend? Is that even possible? Who is ultimately responsible for – or capable of – reversing this trend? Industrialized countries or developing nations? Federal, state, or local governments? Private corporations, religious institutions, or non-profit agencies? You or me?

In this course, you will have the opportunity to wrestle with these and other significant conservation questions as you explore the interconnections between the natural environment, economic markets, cultures, religions, and ethics. The readings have been carefully chosen to provide you with a solid foundation in conservation theory and ecological principles, while at the same time allowing you to explore significant case studies. You will be keeping a *Visible Thinking Journal* in which you capture your reactions, thoughts, ideas, and questions, allowing you to make connections between texts, class discussions, and your experiences. Your classmates will read and respond to your journal entries, allowing you both to deepen your interactions with the subject. We will bring those ideas to class for what promises to be exciting and lively discussions! Finally, you will use your writing throughout the semester to guide you in crafting a personal essay about your environmental ethic, similar in form to the National Public Radio series *This, I believe*.

Conservation biology is an applied science, dedicated to conserving biological diversity on our planet. In line with the philosophy of the discipline, a recurring theme in this class, and the topic of the first of two major writing assignments, will be *Think Globally, Act Locally*. What connections can we make between this global biodiversity crisis and our everyday actions? Which conservation issues should be solved locally, and which require an international approach? Should it matter to Americans if species in another country go extinct?

This section of Writing 20 is an official Gateway Course for Research Service Learning, and, as such, provides you with the unique opportunity to participate in several local conservation research projects with our community partner, the Eno River State Park. Your time out in the field will allow you to make connections between theory and practice, between reading and experience, between thinking and action. Your final writing project of the semester will be a *Research Proposal* that may be submitted for funding by Duke University's Office of Service Learning.



Writing 20: Academic Writing

Writing 20: Academic Writing is the only course required of all undergraduates at Duke University. If you take a moment to think about it, it is really quite astonishing: of the hundreds of courses that are offered at Duke, only *one* is deemed so essential that all Duke students must take it. The reason is quite simple – ***the ability to write clear and compelling arguments indicates not only an understanding of the subject, but also critical thinking skills.***

In this course, you have the opportunity to apply writing skills and perspectives to the specific questions of Conservation Biology, but what you learn here will prepare you to identify relevant questions and articulate sophisticated arguments in your future academic work, regardless of the discipline.

Like all sections of Writing 20, this course emphasizes ***writing as a social process***, and is

committed to helping you generate effective academic arguments. I will emphasize writing as a mode of intellectual inquiry. As I ask you to clarify your writing, I am really asking you to also to deepen your thinking and to re-read with new purpose.

Effective writing is both a skill and an art. My goal is to teach you some of the critical skills essential for effective writing. However, the art of good writing only comes with experience, which is derived from reading, drafting, receiving feedback, and revision. My goal for you is that you leave this course with the ability to write powerfully about texts and ideas, enabling you to participate actively in scholarly conversations at Duke and in the community.

Good luck, and good writing!

What are the goals and practices of Writing 20?

(from <http://uwp.aas.duke.edu/writing20/students/goals.html>)

While many of the specific features of academic writing vary from discipline to discipline, students in all sections of Writing 20 learn how to:

1. *Engage with the work of others.* In pursuing a line of inquiry or research, scholars need to identify and engage with what others have written about a text or issue. This academic move asks that writers read closely and attend to context, and that they make fair, generous, and assertive use of the work of others.
2. *Articulate a position.* The point of engaging with the work of others is to move beyond what has been said before. Scholars respond to gaps, inconsistencies, or complexities in the literature of their field and anticipate possible counterarguments in order to provide new evidence or interpretations that advance clear and interesting positions.
3. *Situate their writing within specific contexts.* In order to best contribute to their fields of inquiry, scholarly writers need to develop an awareness of the expectations and concerns of their intended readers. These expectations include not only appropriate and effective support for an argument, but also conventions of acknowledgement, citation, document design, and presentation of evidence.

The actual labor of producing a written academic argument usually involves taking a text through several drafts. In developing a work-in-progress, students in all sections of Writing 20 are offered practice in:

1. *Researching.* Students critically read scholarly work about their topics of interest. Depending on the field, this research may include locating sources, questioning methodology, examining evidence, identifying social or political contexts, or considering the implications of an academic work.
2. *Workshopping.* Academic writers re-read their own writing and share work-in-progress with colleagues in order to reconsider their arguments. Students learn how to become critical readers of their own prose through responding to one another in classroom workshops, seminar discussions, or conferences.
3. *Revising.* Students are asked to rethink their work-in-progress in ways that go beyond simply fixing errors or polishing sentences in order to extend, refine, and reshape what they have to say and how they say it.
4. *Editing.* As a final step in preparing documents for specific audiences, students are expected to edit for clarity, proofread for correctness, and make effective use of visual design.

Think globally, act locally: Research Service Learning

Conservation Biology is a Research Service Learning (RSL) course, meaning that in addition to coursework, you will have the opportunity to engage in conservation research with resource scientists in our community. Current projects include:

- Inventory of small mammal communities in the Eno River State Park
- Assessment of aquatic diversity in the Eno River
- The impacts of the Pleasant Green Dam removal on biodiversity
- Mapping habitat preference by invasive plant species



RSL at Duke provides both students and faculty members with the opportunity to pursue academic projects derived from community needs and interests. A requirement of this program is that students must perform a minimum of 20 hours of community service linked to the themes of the course, and that the faculty member must provide structured opportunities for critical reflection on personal, institutional, theoretical, and policy issues. Although the investment in time and energy is substantial, the payoff is well worth it. RSL helps you to develop basic research skills (e.g., conducting a literature review, identifying a research question, taking field notes, gathering and/or analyzing data, etc) and enables you to produce a substantial product that will benefit our community partners. Students who complete all three stages will be named Duke Civic Scholars. Find out more about RSL at <http://rsl.duke.mc.duke.edu/>.

Who's who in this course?



Director: Cheri Ross, Ph.D.
 Faculty Director: David Malone, Ph.D.
 Program Coordinator: Jennifer Ahern-Dodson, Ph.D.
 Program Coordinator: Vicki Stocking, Ph.D.
 Staff Assistant: Donna Boyd
<http://rsl.duke.mc.duke.edu/>

A student-run organization comprised of trained facilitators who facilitate reflection sessions for service-learning courses.
 Beth (bethany.grim@duke.edu) and Carina (carina.barnettloro@duke.edu)
<http://www.duke.edu/web/LEAPS/about.htm>



Division of Parks & Recreation
<http://ils.unc.edu/parkproject/ncparks.html>
 Brian Strong brian.strong@ncmail.net
 Head of Natural Resources Program
 Ed Corey ed.corey@ncmail.net
 Inventory Biologist

NC Wildlife Resources Commission
<http://www.ncwildlife.org/>
 Robert B. Nichols
rob.nichols@ncwildlife.org
 Aquatic NonGame Coordinator



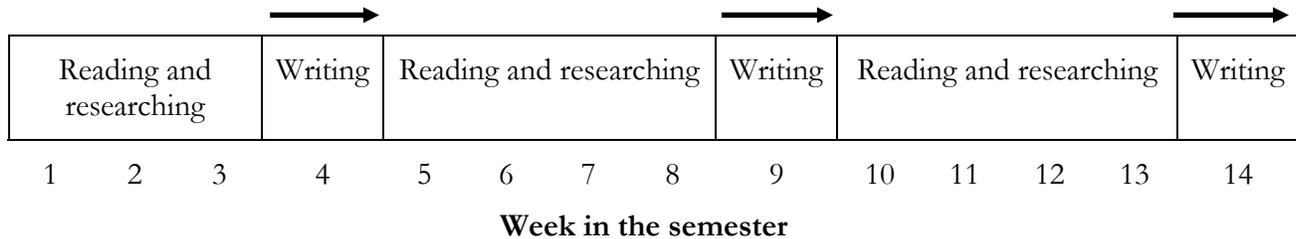
<http://ils.unc.edu/parkproject/visit/enri/home.html>
 Eno River State Park Rangers:
 Christopher Ammon
christopher.ammon@ncmail.net
 Amy Duggins amy.duggins@ncmail.net
 Jason Gwinn jason.gwinn@ncmail.net

<http://www.enoriver.org/>
 A 501c3 non-profit conservation organization whose mission is to conserve and protect the natural, cultural and historic resources of the Eno River basin.

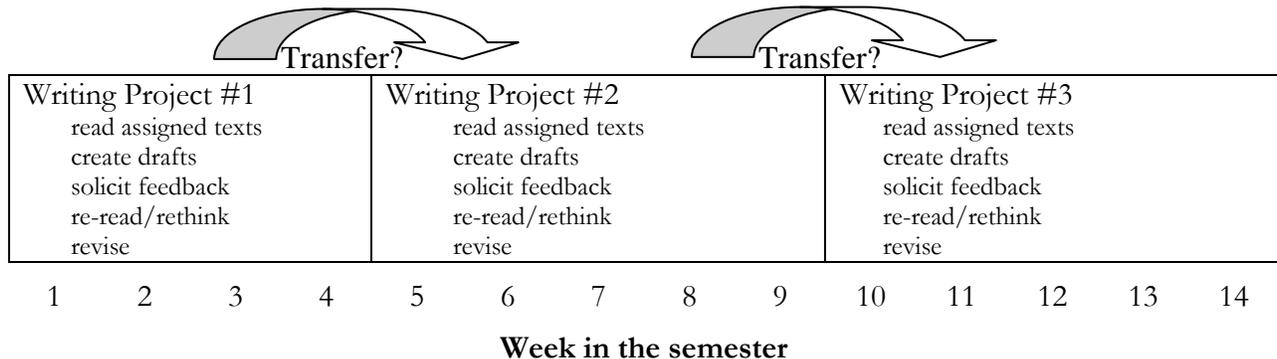
My teaching philosophy

My teaching philosophy is that I want to create a learning environment that is most conducive to your success as a writer. Since my approach is non-traditional, I would like to explain it to you.

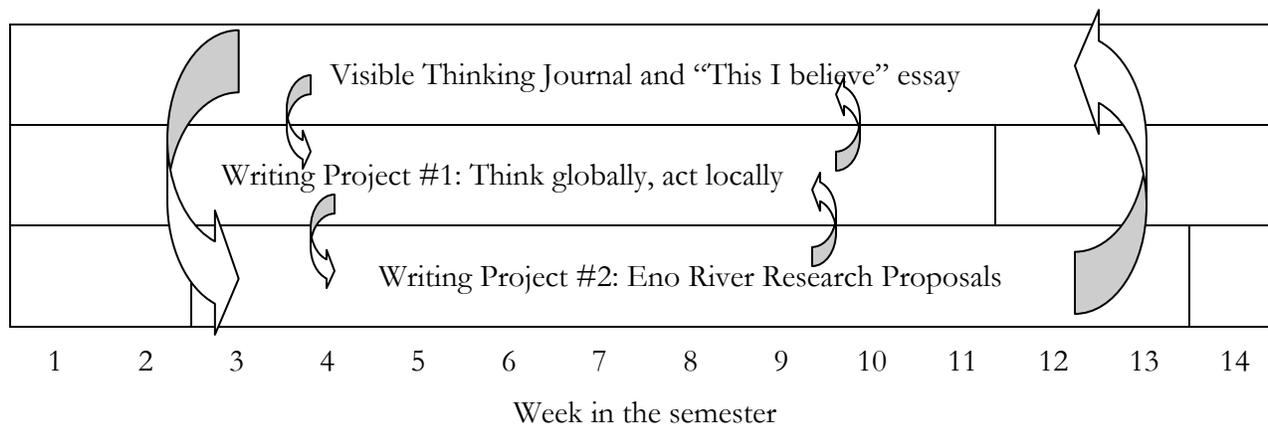
If you were to take a more traditional writing course, you might spend a few weeks reading and researching a topic, then spend a few days (or a week) writing about it. When the next unit begins, the process starts over again. The result is that writing occurs only during discrete chunks of time throughout the semester, as illustrated below. The problem with this approach is that it separates the physical act of writing with the other cognitive acts involved in creating a compelling and clear written argument.



The next step towards integrating the physical act of writing with the mental activities involved in writing is to blur the line between the “reading and researching” stage and the “writing” stage, as illustrated below. In this scenario, you would write notes, outlines, and drafts, then solicit feedback and revise. Nevertheless, when the unit of study is completed, there is an abrupt shift to a new writing project. Since my goal as an instructor is to teach you transferable skills, this scenario excludes the possibility that you could apply writing skills taught at the end of the semester to writing that is completed within the first few weeks. Further, although teachers always assume that students will transfer what they have learned to later writing assignments, there is little evidence to indicate that this actually occurs.



I have taken yet another step to blur the lines imposed by the two scenarios above. As illustrated on the next page, I have overlapped the writing projects that you will be asked to complete this semester to allow you to re-work (and re-think and revise) each project as your understanding of the topic deepens and as you acquire new writing skills. My goal is to encourage you to make connections across topics and to apply feedback on one piece of writing to another. The beauty of this approach is that it mirrors the practice of many professional science writers, and undoubtedly is common throughout the disciplines.



Writing projects

You will engage in the following types of writing in this course:

1. A **Visible thinking journal** (VTJ) is your opportunity to capture your ideas and thoughts – based on what you read, what we discuss in class, and what you experience in the field – for use in later writing projects. Your audience for these journal entries is your classmates – they will be the primary readers of your work and they will be the only ones responding to your writing. Keep your readers in mind when you are writing, and consider your text to be the opening salvo of a conversation you would like to have on the topics in the readings. One of the goals of the VTJ is to help you develop a personal essay that reflects your environmental ethic.
2. Since your classmates are your audience for the VTJ, they will respond to your journal entries in writing, in what I am calling a **Peer Response**. This will be weekly writing that engages your classmates in a written conversation.
3. The most substantive writing you will do in this class are **Writing Projects** (WP). Each writing project will go through several formal drafts, and each draft will be reviewed by your peers, discussed in writing workshops, reviewed by me, revised, and rewritten. I will usually provide written comments on only one draft, but you are welcome to come to talk to me at any point in the writing process.
4. The fourth type of writing you will encounter in this class is the **Peer Review** in which you will provide feedback on your classmates' writing. These peer reviews are designed to formalize the peer-review process that we will use in our writing workshops.
5. You will write several **Reflections**, which will take the form of a letter to me, in which you analyze your own writing and reflect on your intellectual journey. I will also ask you to include a point-by-point response to all the feedback you have received and the choices you made in response to that feedback.
6. At the end of the semester, you will write a very short (<500 word) **Personal Essay** that defines your environmental ethic.

Assessment/Grades

The criteria I use for grading will be included with each assignment you receive. I provide these criteria so you have the greatest opportunity for success. Also, my criteria will change as your writing matures throughout the semester.

Your overall class grade will be calculated as follows:

Visible thinking journal (30%)

- All weekly entries, 12 of which must be at least 500 words long
- All weekly peer responses, 12 of which must be at least 500 words long
- “This I believe” essay, approximately 500 words, that describes your environmental ethic

Writing Project portfolios (60%), which will include:

- Draft one, with feedback from at least two readers (i.e., classmate, peer, Writing Tutor)
- Draft two, with my feedback
- Final draft, with Reflection and Table of Comments

Participation (10%)

- Significant engagement in class discussion
- Completion of a minimum of 20 hours of service before the last day of the semester,
- Attendance in all reflection sessions.

Guidelines for working as part of a seminar: Class participation and etiquette

What distinguishes this seminar from other types of academic courses you may be familiar with is that the work of all participants will be brought to the table for discussion. Therefore, you can expect that most of the writing you do for this course will be read by several of your classmates, and that you will respond to the work of others. The success of the course, therefore, depends upon not only the quality of your work as a writer, but also upon your participation in this group endeavor. To take full advantage of this opportunity, it is essential that you

- Attend class regularly
- Read the assigned material in advance
- Ask and answer questions
- Participate in class discussions and workshops
- Facilitate classmates' participation
- Attend meetings and conferences
- Fulfill your group obligations

Etiquette involves not interrupting class by showing up late, being alert during class, not disrupting the class by "packing up" early; and not impeding classmates' education by talking privately or allowing cell phones or pagers to go off. Think about your behavior and choose actions and language that demonstrates respect for your peers and instructor. Be respectful of your classmate's comments and allow others the opportunity to talk.

If you disagree with a classmate's comment, that is a great opportunity for discussion and debate! However, be tactful and diplomatic in the way you state your disagreement. For example, you may choose to disagree with the comment or perspective rather than with the person expressing it.

We need to view each other as allies in our challenge of working through readings and developing writing, and this class needs to be an environment where everyone can participate without apprehension. Hostility, rudeness, disrespect, and antagonism will not be tolerated.

Writing workshops

At various points in the semester, we will participate in writing workshops. The goal of these workshops is for each student to review the work of classmates, and to have her/his work reviewed as well. The logistics of the workshops will require an attention to detail on all our parts! I will assign 3 students to a group, and these groups will change for each writing project. Prior to the workshop, all students must post their writing project on the course website. Before the workshop, you must download the work of the 2 other students in your group, write two **Peer Reviews**, and come to class prepared to discuss these papers. After the writing workshops, you will revise your papers using your peers' comments and suggestions.

Attendance and Due Dates

Attendance is essential for each student to contribute to and benefit from class. Due dates are posted on the schedule and, unless otherwise specified, are due at the beginning of class. If you know in advance that you will miss a class (due to a religious holiday, athletic commitment, etc.), email me at the beginning of the semester.

Peer Reviews are a vital aspect of the work we do in this class. If you do not show up for class on the day a Peer Review is due with hard copies of your reviews, you will get a zero. Since workshops are contingent upon your attendance, your grade will be penalized by 10% (a full letter grade) for every 5 minutes that you are late to class. If you are more than 25 minutes late, your grade drops to a zero.

Drafts of WPs must be posted to our course web by the specified time and day. The consequence of being late in posting a draft is that the grade of the final draft may be penalized up to 10% per day the paper is late. If you are late in posting a draft, it is your responsibility to email a copy of your draft to the members of your group (and to me) prior to class. Failure to do so may result in an additional 10 point deduction. Similarly, late submission of the final draft may be penalized 10 points for every 24-hour period it is late. Late papers must be handed to me directly, or emailed to me and followed up with a hard copy. It is up to you to confirm that I have your late paper in hand.

Resources

Textbooks

Primack, Richard B. 2004. *A Primer of Conservation Biology* (3rd edition). Sinauer Associated, Inc. Sunderland, MA.

Williams, J. & Colomb G. 2003. *The craft of argument: concise edition*. Addison-Wesley, NY.

Williams, J. 2003. *Style: Ten lessons in clarity and grace* (8th edition). Addison-Wesley, NY.

Using Blackboard and issues of format

You will be posting all of your writing assignments to the course website, so you must become familiar with the computer software "Blackboard." Feel free to email me if you run into any problems.

To ensure facility with this technology, we must adhere to some guidelines. All work must be composed in Microsoft Word (see me if this is a problem for you). We must have unique file names, so save your files as: lastname.assignmentnumber.draftnumber.doc. Further, when posting to Blackboard, use the filename as the "Title" in the Blackboard menu. For example, if Jane Doe posted her second draft of the third writing project, the filename would be: doe.wp3.2.doc. By following this format, we will all be able to discern immediately which draft of whose paper we are reading.

Assignment	Save your file with the following filename	Post your assignment here
VTJ weekly entry	<i>VTJ.yourlastname.date.doc</i>	Discussion Board, VTJ Forum, under the thread with your name
VTJ weekly Peer Response	<i>VTJ.peer'slastname.date.yourlastname.doc</i> OR as an audio file	Discussion Board, VTJ Forum, under the thread with your
This I believe essay	<i>This I Believe.lastname.doc</i>	Discussion Board, VTJ Forum, under the thread with your name
WP1 and WP2	<i>WP#.draft#.lastname.doc</i>	Discussion Board, Writing Project forum, under the thread with your name
Peer Review	<i>PRauthorslastname.yourlastname.doc</i>	Discussion Board, Writing Project forum, under the thread with the author's name

Additionally, put your name, section, assignment number, draft, and date on the first page of each of your writings. Think of a strong title for your writing and put that on the first page as well. Use a header to number your pages, and put your document name in the header.

Keep an electronic copy of each draft of each paper you write for this course. This means you will need to form the habit of duplicating a document and then making changes to the new copy. Keep copies of all drafts of all assignments on a back-up disk, or learn how to post copies of your work (either through Fetch or ftp) to your personal space on the Duke servers. You will need these copies of the various drafts of your essays to complete your work for the course—since when you turn in the final, revised version of a project, I will ask you to track and reflect on the changes you have made in moving from one draft to the next.

Proofreading and Editing

This is not a course in the mechanics of writing. Students in Writing 20 are expected to be able to write reasonably correct prose. This means you are responsible for making sure that your work is presented with care and thought. While I am willing to help you with any questions you may have about points of style, usage, or grammar, I should not be the first reader of your work and I will not accept any writing that strikes me as hurriedly or carelessly prepared. So make sure to review, edit, and proofread all the work you do for this course before you turn it in. Use a spell-checker but don't rely on it. Get a good

college dictionary (either in print or online) and writer's handbook (such as Strunk and White's *The Elements of Style*)—and learn how to use them. Work with a tutor at the Writing Studio. And feel free to ask friends or roommates to look over your work—and thank them in your acknowledgments for their help.

Citing references and avoiding plagiarism

When you quote, paraphrase, respond to, or in any other way draw on the work of others in your writing—as you will do frequently in this course—you need to acknowledge that you are doing so. This is the case whether your sources are published authors, websites, fellow students, teachers, or friends. In this course, I would like you to cite and document sources using the “name-year” system common to scientific journal (see Ch 5 of Pechenik, available on e-reserve). Here are some examples of how you would cite sources in your text.

Single author	The problem setup phase uses the EPANET User's Toolkit (Rossman 1999) to compute the EPS network hydraulics.
Two authors	Thus, an extended period hydraulic simulation (Rao and Bree 1977) will yield a periodic set of network flows that also repeat indefinitely.
Three or more authors	An earlier study used a simpler mass dosage rate parameterization where the dosage must be constant (Boccelli <i>et al.</i> 1998).
Authors named in a signal phrase	Boccelli (1999) and Clark (1998, 2002) have shown that first-order models may underestimate chlorine demand under certain conditions.

The Duke Library has posted guides at <http://www.lib.duke.edu/libguide/citing>

To deliberately present someone else's work as your own is to plagiarize. The Library also has posted guidelines on avoiding plagiarism at: <http://www.lib.duke.edu/libguide/plagiarism>. The more interesting question has to do with how to note influences on your writing in order to make the position you are taking more clear, to show how you are trying to extend, counter, or redeploy the work of others. In any case, though, following the conventions of citation is not always a simple or mechanical process; it can sometimes be hard, for instance, to draw the line between what is common knowledge or not, or between a graceful allusion and a buried source, or between making use of the advice of readers and appropriating their ideas. And so, if you have any questions about if or how you should document your use of a text or idea, play it safe and ask me.

The Writing Studio

The Writing Studio is located on the first floor of the Art Building on East Campus, with satellite locations at Perkins and Lilly Libraries. You can go to the Writing Studio for free one-on-one help with drafting, revising, or editing on any writing project you are doing for a course at Duke. The tutors at the Studio are trained professionals from a variety of disciplines. They are willing to work with you on a one-time basis, or you can set up a regular appointment throughout the term. You can schedule an appointment online at <http://uwp.aas.duke.edu/wstudio/>. When you visit the Studio, bring the essay or project you are working on with you, as well as a copy of the assignment you are responding to. And please let me know if you work with a tutor at the Studio; it shows that you are serious about your writing.