New York University –
Gallatin School of Individualized Study
IDSEM-UG 1740
BRIDGING CULTURE AND NATURE:
AN INTRODUCTION TO CONSERVATION SCIENCE
Fall Semester 2015
Class meeting times: Mondays 6:20 – 9:00 pm

INSTRUCTOR
Jim Tolisano, Adjunct Professor
Office Hours: M 4-6pm
Email: jat10@nyu.edu or jtolisano@gmail.com

COURSE FOCUS
This course is about our relationship to nature – what works, what doesn’t, and what we can do about it. We will specifically focus on living nature, or what we tend to call biodiversity. Recent estimates suggest that more than 30 million species of living organisms inhabit this planet with us. However, the accelerated development of our global economy over the past two centuries has resulted in a natural world where millions of these species are faced with the very real threat of extinction. What factors are causing these extinctions? And, what will be the impact of losing Bengal tigers, leopard frogs, or uncounted tropical plants? What will this mean for other species, for human economies, and for the human spirit? Most importantly, what can be done to reverse this trend and build practical conservation strategies that protect and restore native diversity and ecosystem health? The exploration of each of these questions is the work of the new science of conservation biology, and it will be our focus this semester.

Our Fall 2015 course brings together leading thinking from biology, anthropology, literature, social psychology, economics, music, and communications to explore the art and science of applied conservation biology. The goals of conservation biology are to conserve the incredible diversity of life found on our planet, and, in the process, protect our rich cultural diversity, and our own lives. We will explore 3 themes over the course of the semester:
**Biology** – A review of the diversity of life on earth. What is natural and how do we as a species typically relate to it? How do we measure diversity at the ecosystem, species, and genetic levels? What factors seem to encourage greater diversity? How does diversity seem to affect the health of our planet, and our own physiological, emotional, and spiritual health?

**Society** – The work of conservation biology requires a lot of attention to social factors. We focus on helping people understand their relationship to nature and then apply practices that will keep that relationship healthy for everyone involved – every species, ecosystem, and life process. In this section of the class we will look closely at how we use nature and the impacts those uses have on biodiversity and ecosystems. We will particularly look at solutions that are being tested worldwide to avoid, reduce, minimize, or mitigate our more profound impacts.

**Sanctity** – Towards the end of the class we will delve more deeply into the kind of relationship with nature that we want or need. We will explore the role of ethics in the work of the conservation biologist, and we will examine our own ethical and spiritual systems to see how they can support healthier relationships with all life.

A key premise behind the class is that managing nature really requires us to manage ourselves. Thus, the science of conservation biology cuts across all disciplines. The fieldwork of the physical and biological sciences provides the foundation from which conservation decisions can proceed. However, the applied work of the social sciences, education, business, humanities and arts provide the tools we need to manage ourselves and create a relationship with nature that is mutually supportive. At the course conclusion students from all disciplines should see a role for themselves in the conservation work that is already an essential focus of our next century.
**Course Objectives**

- Develop familiarity with scientific literature on biological diversity, nature conservation, and sustainable natural resource uses
- Articulate societal and personal relationships to nature
- Explore tools and media to strengthen our relationship to nature and influence social and economic decisions affecting the conservation of biodiversity

**Readings and More**

The text for the class will be:


This text is available for free on line in the Resources section of our NYU Class page. Other assigned readings are posted in digital format in a labeled folder on the NYU Class page. A list of required semester readings is also included in this syllabus. However, it is also possible that other readings will be added during the course of the semester, and any additional readings will be emailed to you and posted on the NYU Classes page at least one week in advance. This allows us to keep up with the constant and rapid turnover of insightful writings that are constantly emerging in this very vital field. A total of approximately 30 reading assignments will be completed for the class, in addition to the readings assigned from the textbook.

**COURSE REQUIREMENTS**

Each class will be divided into two sections –

1. The first 75 minutes will be an overview of some key concepts around the week’s theme. I will lead this overview. But, it will never be a lecture. It will always be a dialogue. Therefore, your preparation and participation is key to building the learning experience for everyone in the course. And, your ultimate grade in the class will be dependent on it.

2. During the next 75 minutes, one student in the class will lead a 35-minute activity on a
topic of their choice that pertains directly to the week’s theme (thus there will be 2 student-led discussions each class).

Your final grade will be based on your cumulative score from eight factors: (1) class participation, (2) your group activity session; (3) blog entries on the week’s assigned readings; (4) identification and review of 3 new readings relevant to one of the class topics; (5) an in-class exam on the biology section of the course; (6) an in-class exam on the society section of the course; (7) a take home final exam, and (8) a final independent project.

Participation: The core of this class will be our discussions of topics that explore the theory and real world applications of relationships between cultural, social, and ecological systems. Thus your presence and participation in the class will be an important element in your overall success in the course. Most classes will be shaped as much more of a dialogue than lecture, and students will be expected to bring questions, experiences and ideas to each dialogue. Each class will include a few recommended readings on the week’s topic and students are strongly encouraged to complete these readings in order to facilitate our dialogues, and find other readings, recordings, or videos on their own that enhance the readings.

Group Activity Sessions: Each student will sign up to lead 1 activity session during the semester, and a sign-up sheet will be posted at the beginning of the first class allowing students to select the topic and class in which they want to lead their 35-minute activity and discussion. With permission from the instructor, two students may elect to work together as a team to present one 75-minute session together. Each session must include at least one activity that engages the entire class in an exercise that helps everyone deepen their understanding of the chosen topic. The activity should comprise approximately 15 minutes of the session, with the other 20 minutes devoted to discussion. Examples of activities could include short exams; construction, drawing, or writing projects; games; role-plays, or on line research. Activities can be assigned individually, in small groups, or to the entire group.

Each student or team will be required to complete the following:

- Submit a proposed activity and discussion topic to the instructor at least 5 days prior to the class.
- Once the topic is approved and finalized, the proposed activity and discussion
topic must be emailed to all students in the class, along with any readings or reference materials students are expected to complete before the discussion.

Each student-led discussion will be graded on organization, presentation, and engagement of the class. A sign-up sheet for the session in which you will lead a group activity will be posted at the end of the first class.

**Your Group Activity session must be different than your choice for the class reading questions, and supplemental readings session.**

**Blog Entries on Weekly Readings:** Each student will select one reading assignment from all of the readings posted, and will prepare 3 questions that the reading raised for them. A sign-up sheet for the reading you select will be posted at the end of the first class.

Your 3 questions will be posted on the NYU Class page under the “Forums” tab at least 2 days prior to the class for which the reading is assigned. For each entry the title of the article will be posted in the “Topic Title” tab. A concise summary of the main points covered in the reading will be posted in the “Short Description” box, and you will include your name at the end of this summary. Your 3 questions will be posted in the “Description” box. Make certain that your questions are concise, clear, and directly pertain to the topics covered in the reading. Your questions must be posted no later than 4 days prior to each class (thus on Thursday of the week before the class during which the readings are assigned).

*Every student in the class, other than the student who has posted the 3 questions, will then attach a very concise blog entry providing commentary on the 3 questions.* Thus every student will be commenting on the posted 3 questions each week. Your blog entry must be less than 250 words, and must directly pertain to the topics raised. Your commentary can be structured as a personal essay, commentary, or scientific critique of the 3 questions. All scientific critiques must include peer-reviewed citations. Your blog entry attachment must be posted no later than 12pm on Monday of the class to which the 3 questions pertain.

Your questions and the comments raised by them will be used to expand the in class discussion of the evening’s topic.

**Your review of class readings session must be different than your choice for the class activity**
session, and supplemental readings session.

Supplemental Research to Identify 3 New Readings-Audio-Visual Reports: Each student will select one class topic and identify and evaluate 3 new readings, audio, or visual reports that can help expand our understanding of the relevance and importance of the topic to the class theme. A sign-up sheet for the topic for which you will elect to do supplemental research will be posted at the end of the first class. At least 1 of the supplemental readings, or audio or visual reports that you identify and evaluate must be scientifically based, and thus obtained from a peer-reviewed scientific journal. The other 2 readings, or audio or visual reports can be obtained from any source of your choice, including popular journals and magazines, books, blogs, podcasts, or similar sources. You will be required to post a list of the 3 readings, audio or visual reports you have found, along with a concise 250 word or less summary of the key points in the 3 references. This posting will be done on the NYU Class page under the “Forums” tab. Insert the wording “Supplemental Readings for ____ class”, the class date, and your name in the “Topic Title” tab. Include your summary of the key points in the 3 references in the “Short Description” box. Provide a link to allow us to access each reading, audio or visual report in the “Description” box (if this is feasible). Make certain that your supplemental readings directly pertain to the topics covered in the class topic that you selected. Your supplemental readings must be posted no later than 12pm of the day of the class topic that you have selected. You should also be prepared to discuss these supplemental readings during the class period. Other students in the class are not required to review these supplemental readings, although they are encouraged to do so.

Your supplemental readings session must be different than your choice for the group activity session, and the class reading questions session.

Section Summary Exams (2): A short exam will be posted on the NYU Class site at the end of each section of the course – thus one short exam at the end of the “Biology” section of the class, and a second short exam at the end of the “Society” section of the class. You will be required to submit your response to this short exam within 24 hours of the exam posting.

Take Home Exam: A take-home exam will be handed out at the beginning of the second to last class and will be due back at the beginning of the final class.

Final Project: Each student will be required to complete a final independent project. The final
project can be either (a) a research report of approximately 10-12 pages in length (typed, double-spaced), or (b) a visual or acoustical product that accompanies a descriptive written text. The topics for the final project will range from hard science to social inquiry and the communication arts. Thus, as an example, students with a strong interest in creative writing, music, business, theater, education, film, or similar disciplines may choose a topic that enables them to create both a visual and written product that demonstrates the role of their particular discipline in solving environmental problems. Service and group projects are possible, but need to be reviewed in detail with the instructor before approval. Project development consists of four stages: (1) provide the instructor with a one-page project proposal; (2) submit a revised proposal statement (if requested) based on initial comments from the instructor; (3) submit a one page project status report 4 weeks after the proposal is accepted; and (4) turn in the final project. You will be required to deliver your final project by the second to last class of the semester. Be prepared to provide the class with a 5-minute summary of your project and what you learned from it.

Your final grade will be based on a possible 100 points to be determined as follows:

- Overall class participation (20 points)
- Class presentation and discussion session (10 points)
- Blog entries on assigned readings (10 points)
- Supplemental research (5 points)
- In-Class Exam – Biology (5 points)
- In-Class Exam – Society (5 points)
- Final Exam (20 points)
- Final project (25 points total)

**Incomplete grades:** Students anticipating constraints to completing all course assignments must notify the instructor no later than the 12th week of the semester.
## Course Topics and Schedule

<table>
<thead>
<tr>
<th>CLASS</th>
<th>DATE</th>
<th>TOPIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOLOGY</td>
<td></td>
<td>Introduction and Class Overview – course schedule, requirements, expectations, and a game plan for moving forward. An initial look at the relationships of people to nature from prehistoric times to the present - what have we mostly been doing with our days over the past 200,000 years? What do we know, how do we know it, and why does it matter? Ethics And Values That Drive Conservation Practice.</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>What Is Natural? What Is Wild? What is it that we are really trying to protect and conserve?</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>Biodiversity at the Species Level – What makes a species, and why are there so many?</td>
</tr>
</tbody>
</table>

Biodiversity at the Genetic – Ecosystem Levels

Readings:


How do we measure biodiversity and ecosystems? Why do we bother?

Readings:


ONE PAGE OUTLINE OF PROJECT PROPOSAL DUE

IN CLASS EXAM - BIOLOGY

SOCIETY

Open Class: To Be Determined as a Team
| 7 | **Threats to Biodiversity From Society – Extinction – Habitat Degradation and Loss – Overexploitation – Exotic Species and Disease**

**Recommended Readings:**


| 8 | **Threats to Biodiversity from Society – Climate Change (the game changer)**

**Recommended Readings:**


| | **Conservation Solutions – Protected Areas, Restoration, and Best Management Practices** |
| 9 | **Recommended Readings:**  
Chapter 11 (Thomas Brooks), “Conservation Planning”, pp. 199-214; and  
Diane Russell and Camilla Harshbarger, Groundwork for Community-Based Conservation, chapter 2, “Conservation as Human Behavior”, pp. 15-26, and  
|---|---|
| 10 | **Placing a Value on Biodiversity – Economics and Morals Meet Up**  
**Recommended Readings:**  
<table>
<thead>
<tr>
<th>Communication Skills – Artists as the new naturalists</th>
</tr>
</thead>
</table>

**Recommended Readings:**


- The Nature Conservancy – “Hope for the New Wild” - [http://www.nature.org/new-wild/index.htm?intc=newwild.tnav.logo](http://www.nature.org/new-wild/index.htm?intc=newwild.tnav.logo). Select one topic from the menu of options, review all text, photo, and video content for that topic and be prepared to evaluate it in class.
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>
| 12 | **What is sacred? How do we experience the sacred in nature? How does this inform our relationship to nature?**  
  **Recommended Readings:**  
| 13 | **PRESENTATION OF PROJECTS**  
Findings – Results from Student Field Explorations  
**TAKE HOME EXAM HANDED OUT** |
| 14 | **TAKE HOME EXAM DUE** |