COURSE FOCUS

This course takes the ideas developed in IDSEM 1740 Bridging Culture and Nature and provides students with a learning environment to apply these principles and tools in real world contexts. A key premise behind the class is that managing nature and protecting biological diversity and ecosystem functions ultimately requires us to manage ourselves – the amount and way we choose to use natural resources, and the impacts of our behavior on nature. The science of conservation biology has evolved over the past 40 years to produce practical tools to support this self-management, and its practitioners rely on experience and expertise that cuts across all professional disciplines. The fieldwork of the physical and biological sciences provides the foundation from which biodiversity 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 supports our human needs and desires without impeding or threatening the lives and habitats of the millions of other species with who we share this planet.

Advanced Conservation Biology will provide students with an opportunity to apply the key ideas covered in Bridging Culture and Nature to solve specific conservation challenges. Students will explore specific natural and social science tools used to frame risks and threats to nature, and then test methods to plan and implement practical solutions that can help avoid,
mitigate, or offset these threats.

Students will also have an opportunity to test their understanding of these principles by developing a practical conservation strategy designed to respond to threats and risks to biodiversity. The students in the Gallatin practicum will form two teams, and each team will select a site-based project from a menu of project options. Each site-based project will reflect a real world threat to biodiversity, and one that practicing conservation biologists are actively trying to solve. The student teams will then work collaboratively through the remainder of the semester to develop a detailed proposal describing the content of a project that can respond to these risks and threats. They will research lessons learned from anthropology, social psychology, economics, biology, communications and the arts, and they will use their findings to produce an original concept that is thorough, evidence based, and achievable. “Evidence based conservation” requires practitioners to plan and make decisions by integrating the most convincing technical information available with expertise from working professionals. Decisions also integrate the characteristics, needs, values, and preferences of affected stakeholders. Each group will ensure that their final proposal incorporates all of these factors.

In order to meet these evidence-based standards, each team will produce a proposal that includes the following components:

- **Biology** – a description of indicators that will be used to establish the source, range and magnitude of threats to biodiversity and cultural integrity in the selected project area, and recommendations for parameters to be measured and monitored to demonstrate the results from any interventions that will be proposed.

- **Society** – a detailed description of specific interventions that will be proposed to help avoid, mitigate, or offset the threats to biodiversity and natural resources. The proposed interventions can include new government or corporate policies to affect corporate behavior, financial transactions, and rural livelihoods; improved practices to reduce adverse impacts throughout the supply chain for commercial products; improved practices to reduce adverse impacts from new or improved infrastructure and energy supply; trade agreements; and other management practices that can be promoted as a response to the identified risks and threats.
Sanctity – a description of the education, communications, and social engagement work to be carried out to change people’s behavior in the project areas, and create more beneficial interactions with nature. Students will identify specific target audiences for communications and education work, and elaborate sample lessons they will use to convey their story.

Course Objectives

- Develop familiarity with scientific literature on biological diversity, nature conservation, and sustainable natural resource uses
- Explore tools and media to monitor, evaluate, and communicate strategies to influence social and economic decisions affecting the conservation of biodiversity
- Develop practical skills in the design and communication of biodiversity conservation projects.

Readings and More

The required textbook for the class is:


This textbook is available free on line at: [https://conbio.org/publications/free-textbook/](https://conbio.org/publications/free-textbook/).

A PDF copy of this textbook has also been uploaded to your NYC Classes web site in the “Resources” tab in the folder “Course textbook”.

Each class will also include assigned materials (written or visual) that will be posted in a folder on our NYU Class web site, and that are listed in your course syllabus. Students will also be strongly encouraged to seek out other materials pertinent to each week’s topic on their own and share their findings with others in the class.

Students who feel they need additional background materials in conservation biology to support their work in the class are strongly encouraged to selectively explore one or more of the

*Bridging Culture and Nature – IDSEM-UG 1740 Fall 2015 Syllabus*
following texts:


**COURSE REQUIREMENTS**

We will cover three themes during the course of our practicum:

- **Biology** – in this section we will explore the biological and ecological factors that drive successful conservation projects. We will explore the scientific principles that support effective conservation biology in practice.

- **Society** – during this section of the class we will look more closely at how human decisions affect natural systems, and the conservation biology projects that are designed to sustain nature. We will examine how agriculture, forestry, extractive industries, and others alter landscapes and ecosystems, and how these businesses can adopt more “green” practices to reduce or offset these impacts. We will examine some of the economic, finance, and policy principles that support effective conservation biology.

- **Sanctity** – in our final two classes we will look at how conservation biologists can engage civil society and the general public in the work of conservation biology. We will specifically look at the role of communication and education programs to support this greater civic engagement.

Each class will be divided into three 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 second 45 minutes, one student in the class will lead an activity and group discussion on a topic of their choice that pertains directly to the week’s theme.

(3) During the final 30 minutes, each student team will work on their respective project – student teams will use this time to identify research needs, share new information, and plan individual and shared work tasks to complete their semester 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 readings on the week’s topic and the materials in these readings will stimulate and facilitate our dialogues.

**Group Activity Sessions:** Each student will sign up to lead 1 activity session during the semester. The student leading this session will prepare a short activity designed to engage fellow students in a practical analysis of the topic, and include questions based on your activity that can guide a deeper dialogue on the topic. 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. The activity should comprise approximately 15-30 minutes of the session, with the remainder of the time devoted to discussion. A sign up sheet will be provided the first week of class in which students will select a topic and the week in which they want to lead the class in this discussion. The student leading this activity should submit their proposed activity to me at least 48 hours before the class begins.

Each student-led activity and 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.
“Student Choice” Class Meetings – The last class in each theme section will explore topics selected by the students, and the class will be designed to integrate and complete the theme. Each student will select a specific topic within the theme that they would like to explore more deeply, and they will lead a 15-20 minute discussion of that topic during our “Student Choice” meeting. For example, within our study of the “Biology” theme a student may want to explore how wildlife monitoring programs are carried out in the field, and specifically how non-invasive techniques can be used to study wildlife without disrupting or harming them in the process. The student will need to do some background research on non-invasive inventory and monitoring techniques, and will then lead a 15-20 minute review of this topic during our “Student Choice” meeting at the end of the “Biology” theme. They will solicit input, creative thinking, and guidance from other students (and from me) to arrive at a deeper understanding of their chosen topic.

Students can choose to work in teams of 2 or 3 on these “Student Choice” topics, if they wish. In this case, they will be allowed double (or triple) the amount of time for their discussion section, and they will be able to cover more than one topic if they so choose.

Each student, or group of students, will email me a description of the specific topic they want to cover during the “Student Choice” class meetings. They will also assign and distribute any references they want the other class members to review prior to our class meeting. The topics must be emailed to me no later than 3 days prior to our class meeting, and the supplemental references distributed no later than 2 days prior to our class.

Blog Entries on Weekly Readings: Each student will submit a concise blog entry each week providing commentary on the readings and personal observations around the upcoming weekly topic. Thus each student will post a blog entry 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 readings and topic. Blog entries should include the weekly topic in the title, and should be posted in the Forum section of our NYU Class page. Your blog entry attachment must be posted no later than 10am on the day of class. You do not need to blog entries for the “Class Choice” topic classes (February 25, April 7, and
Supplemental Research to Identify New Reference Materials: Each student will identify at least two new readings, audio, or visual references for each class topic. Your two new reference materials should be selected to help expand our understanding of the relevance and importance of each class topic. 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 reference can be obtained from any source of your choice, including popular journals and magazines, books, blogs, podcasts, or similar sources. A citation for your recommended supplemental materials should be posted in the Forums tab of our NYU Class page, along with a very concise 50 word or less summary of the key points in each reference. Insert the wording “Supplemental Readings for ____ class” and your name in the “Topic Title” tab. Your supplemental materials 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. You do not need to produce references for the “Class Choice” topic classes (February 25, April 7, and April 28), or for the final project presentation class on May 5.

Final Project: Students will form teams of 3-4, and each team will prepare a comprehensive conservation strategy to respond to conservation risks and challenges in a selected target area. The student groups will select one target area as the focus of their research from the following menu of options:

- The protected forests of the Lower Mekong Sub-Region and its tributaries in Cambodia
- The coastal and near shore marine environments in the Western Indian Ocean region of Madagascar, Comoros, Mauritius, La Reunion, and Seychelles
- The Amazonian forest and grassland areas of Colombia
- The freshwater and marine ecosystems of the Pacific Northwest in North America, with a particular focus on managing impacts in the commercial fisheries sector.
- The Mexico-Arizona-New Mexico border region
- The private land areas of the Adirondacks State Park.

The student team will carry out a comprehensive research and planning activity for their
selected geographic area, and each team will produce a proposed conservation strategy that will delineate a specific area of concern in their selected area. The conservation strategy will include the following four components:

- **Biological Assessment** – an analysis of the biological and ecological characteristics in their delineated area of concern, and identification and prioritization of the risks and threats to biodiversity, and survey of opportunities for increased conservation.
- **Socio-Economic Assessment** – an analysis of the social, institutional, and economic characteristics in the delineated area of concern, and identification of constraints and limitations to enhanced conservation, and survey of opportunities for increased conservation.
- **Data analysis** – a survey of existing biological, social, and economic data in the delineated area of concern, and identification of data gaps and limitations.
- **Communication and Engagement Assessment** – a survey of work being carried out by organizations and institutions actively engaged in conservation efforts in the delineated area of concern, and a determination of communication needs, opportunities, and requirements in order to increase awareness and appreciation for conservation priorities.

One student from each team will be assigned to lead each component, and the component leader will be responsible for soliciting support and input from other team members as needed. The team will collectively use the results from this assessment work to produce an integrated conservation strategy for the selected target area. The strategy will include a summary of the findings from the four component assessments, and detailed recommendations for actions necessary to strengthen biodiversity conservation in the target area. The final strategy will include a written report, and a formal presentation using PowerPoint or Prezi to summarize the findings in the written report. The final report will be structured as a proposal that can be submitted to obtain financial or institutional support for the recommendations made by the class. The final report should describe the research work carried out; the results derived; lessons learned from your experience; and recommendations for follow-on actions that can be carried out to further develop the work that you have started. The team report can be organized and structured in any fashion that the class chooses. However, the report can only be a maximum of 25 pages in length and should include, at a minimum, the following information:

**Executive Summary** – a 1-2 page summary of the key points included in the report
**Problem Statement** – a concise description of the specific conservation problem(s) your team identified and studied in the selected target area. This should include a description of the key conservation risks, threats, and opportunities that were identified by the four component leaders (recommendation: 3-5 pages)

**Methodology** – a description of the methods and sources you used to produce the cumulative team results. (recommendation: 1 page or less)

**Results Summary** – In this section you will summarize the findings and conclusions drawn from the analysis of the four components. What are some of the specific biological actions that are already in place to conserve biodiversity? Where are there gaps in this conservation, and what may be constraints to bridge those gaps? What social, institutional, and economic changes are occurring to support these conservation efforts and needs? Where are there opportunities for greater engagement of civil society and the private sector in these conservation needs? Be creative, but also be realistic and practical in your analysis or results and identification of needs and opportunities.

**Conclusions and Recommendations for Further Actions** – This section of your report will use the results from your analysis work to show the next steps that are needed to move your proposed strategy forward. This section should assess the changes and actions that may be required to achieve these recommended next steps – institutionally, socially, and financially. You will get extra credit if you estimate and include a budget for implementation of these next steps. (recommendation: 2-4 pages)

**References**

**Individuals contacted** (if appropriate)

**Appendices** – include here charts, graphs, survey instruments, or other materials that are supplemental to, but supportive of the main body of the proposal. *This information is not counted towards the total length of the document.*
Each team will deliver a 50-minute presentation on their conservation strategy during the last class meeting. The presentation will include a 30-35 minute summary of the material included in their strategy, and 15-20 minutes of open questions and discussion. You will be presented to your other class members, although I will also likely invite other faculty and professionals to join and view these presentations.

The final report and the PowerPoint of Prezi presentation will be delivered on or before the date of the scheduled final exam for the class.

**Grading:** Your final grade will be based on your cumulative score from 6 factors: (1) class participation, (2) your class presentation and discussion session; (3) your Student Choice class discussion sessions; (3) blog entries on the week’s assigned readings; (4) identification and review of 2 new reference materials relevant to each class topic; (5) a take home final exam, and (6) a final team project. 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)
- Student Choice class discussion sessions (15 points)
- Blog entries on assigned topics (15 points)
- Supplemental research on assigned topics (15 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**

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<thead>
<tr>
<th>CLASS</th>
<th>DATE</th>
<th>TOPIC</th>
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<tbody>
<tr>
<td><strong>BIOLOGY</strong></td>
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<td><strong>Introduction and Class Overview</strong> – course schedule, requirements, expectations, and a game plan for moving forward.</td>
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<td>Feb 25</td>
<td>Class Choice for Today’s Topic (determined Feb 18) – Integrating the Biological Solutions to Conservation Threats</td>
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<td>Class Preparation Materials: TBD</td>
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**SOCIETY**

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<tr>
<th>Mar 3</th>
<th>Conservation in Working Landscapes – managed forests, conservation agriculture, urban wilderness, restoration ecology</th>
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<tr>
<td></td>
<td><strong>Class Preparation Materials:</strong></td>
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<td>World Wildlife Fund, 2015. WWF Forest Certification Assessment Tool</td>
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<td>Mar 10</td>
<td>Creating Green Businesses – Direct and indirect economic values of</td>
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<td>nature – economic valuations of species and ecosystems, non-consutmpive</td>
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<td>no harm, certification and good practice standards, green agriculture</td>
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<td>and forestry creating a “green economy”</td>
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**Class Preparation Materials:**


| Date | 
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**Using Finance as a Conservation Tool** – changing the lending and investment practices of banks and other financial institutions through voluntary and regulated standards; conservation finance strategies.  

**Class Preparation Materials:**  
NatureVest Overview and 2015 Outlook (PPT presentation)  
| Mar 31 | **Adapting to Climate Degradation** – strategies to protect biodiversity in changing landscapes  

**Class Preparation Materials:**  
and biodiversity”, pp. 163-180

http://www.newyorker.com/magazine/2015/08/24/the-weight-of-the-world


Class Choice for Today’s Topic (determined during April 4 class) – Integrating the Social Solutions to Conservation Threats

Class Preparation Materials: To be determined

TAKE HOME EXAM - SOCIETY

1-PAGE STATUS REPORT ON FINAL PROJECT DUE

SANCTITY

Engaging Civil Society in Conservation – ethical values of biological diversity, working with faith-based communities, the role of NGOs in conservation

Class Preparation Materials:

https://www.youtube.com/watch?v=2jf9xrnUjpI&feature=iv&annotation_id=521d35b1-0-28e7-83fa-89e015389fc&src_vid=hAHwDBYjQ28

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<td>Apr 21</td>
<td>Communication Skills for Conservation Practitioners –</td>
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<td>Apr 28</td>
<td>Class Choice for Today’s Topic (determined during April 21 class) –</td>
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<td>May 5</td>
<td>PRESENTATION OF STUDENT PROJECTS</td>
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<td>May 12</td>
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