Antarctica: Science, governance and conservation on a frozen continent
Integrated Syllabi
(Up to 12 credits total Undergraduate including field component)
Undergraduate and graduate options

Note that this is integrated course outline for the winter-term. The final course CRN (or CRNs) to make up the winter term 12-credit course load for undergraduates and 9-credit load for graduate students will be advised during Fall term 2015. This course outline is subject to change.

Course description: Antarctica is the coldest, driest, and windiest place on earth. Its remoteness has captured the human imagination for centuries. Visit a popular media website or skim the contents table of a leading scientific journal such as Science or Nature and you will quickly find a story or paper about Antarctica, its wildlife and human impacts on the continent.

As the only continent designated as a “natural reserve, devoted to peace and science,” Antarctica provides a unique opportunity for research on seabirds and marine mammals, Antarctic food webs, global environmental processes, as well as an excellent example of large-scale international conservation efforts.

This course, in class and in Antarctica, we will explore the history, geology, climate, and ecosystems of Antarctica, with special emphasis on current Antarctic research and related conservation issues. The course will focus on critical thinking and research skills developed through independent research on topics of interest and discussions of relevant case studies in Antarctic research and conservation. This course combines in-class instruction, online activities, field activities and assignments for 12 credits.

Instructors:

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Office hours: TBD or by appointment. During office
hours Dr. Harte and or the course GTA will be available to chat via the chat function on Canvas or to meet with students in my office on the OSU campus (Burt Hall, Room 105). I will not be online 24 hours a day. As such, please be patient with your questions and I will get back to you in a timely manner.

**Course format:** This set of course will be delivered via Canvas and in person, through which you will interact with your classmates, with me and with Antarctic researchers at OSU. Within the Canvas course site you will access the syllabus, lectures, and learning materials; discuss topics and submit assignments; take quizzes; e-mail the instructor and other students; participate in online activities; and display your work. To preview how an online course works, visit the Ecampus Course Demo at: [http://ecampus.oregonstate.edu/coursedemo/](http://ecampus.oregonstate.edu/coursedemo/). For technical assistance, Canvas and otherwise, see: [http://ecampus.oregonstate.edu/services/technical-help.htm](http://ecampus.oregonstate.edu/services/technical-help.htm)

**Lecture Schedule:**
Weekly lectures (online and blended) and lab sessions will prepare students for the field projects to be undertaken in Antarctica.

**Learning Outcomes:**
During this course students will:

1. Develop, through lectures and assigned readings, a holistic, inter-disciplinary understanding of the biophysical and human dimensions of life in Antarctica, its history, research activities and its future.
2. Develop a specialized understanding, through independent study, of the issues in one or more specific area of Antarctic enquiry related to their major (e.g., history of science/exploration, environmental ethics, geology and global climate change, sea birds, marine mamals and/or southern ocean conservation, etc.).
3. Experience the grandeur of the Antarctica.
4. Demonstrate an understanding of the challenges carrying out research in Antarctica.
5. Critically evaluate different perspectives of relevant conservation issues.
6. Demonstrate the use of logic and reasoning to synthesize information and arrive at defensible conclusions.
7. Identify biases and assumptions in their own work and the work of others.
Prerequisites: Undergraduates:
FW 467 Antarctic Science and Conservation (this will be taught
Fall Term 2015 offered as e-
campus and blended course)
Please contact the instructor if
taking this course in Fall 2015 is
not possible.
Graduates: Admission to OSU
graduate program
Non-degree seeking: Please
discuss with course instructor.

Required texts: TBD. Readings
will also come from posted book
chapters, primary literature,
agency reports or online sources, and will be available on Canvas

Evaluation of student performance: Learning outcomes will be measured via weekly blogs, in-depth
literature reviews, independent research paper, research presentation and research poster.

Assignments and grading:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Weekly Blogs (5)</td>
<td>20%</td>
</tr>
<tr>
<td>Literature reviews (2)</td>
<td>25%</td>
</tr>
<tr>
<td>Research Paper</td>
<td>25%</td>
</tr>
<tr>
<td>Research Presentation review</td>
<td>10%</td>
</tr>
<tr>
<td>Research Poster</td>
<td>20%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Grading Scheme

<table>
<thead>
<tr>
<th>Grade</th>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Exceptional</td>
<td>Outstanding work, in-depth research, analysis or thought and very well written using highly persuasive arguments and displaying much originality. A pleasure to read using superior sentence variety and vocabulary. Should be published or become a “how to” example for other students.</td>
</tr>
<tr>
<td>A-</td>
<td></td>
<td>Generally excellent to very good research, analysis or thought and well written with some originality making good use of appropriate vocabulary, sentence structure and well organized.</td>
</tr>
<tr>
<td>B+</td>
<td>Superior</td>
<td>Good research, analysis or thought, well written using effective sentence structure and appropriate vocabulary but does not display in-depth research or much originality.</td>
</tr>
<tr>
<td>B</td>
<td></td>
<td>Good research, analysis or thought to support main points and soundly</td>
</tr>
<tr>
<td>Grade</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>-------</td>
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<td></td>
</tr>
<tr>
<td>A-</td>
<td>Competent research, analysis or thought and soundly written but approach, supporting research or aspects of writing could be improved.</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>Fair research, analysis or thought, has worth but approach and/or writing need improvement.</td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>Work demonstrates an understanding of the topic or question but fails to address all dimensions adequately and/or writing style and organization limits the reader’s ability to take on board ideas and concepts.</td>
<td></td>
</tr>
<tr>
<td>C-</td>
<td>Barely acceptable work from a graduate student. Research, thought and analysis may be inadequate and flawed and/or use of language, sentence structure or organization needs considerable improvement.</td>
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</tr>
<tr>
<td>D</td>
<td>Unacceptable work from a graduate student. Demonstrates a lack of effort. Does not demonstrate command of subject matter, approach and/or is poorly written and difficult to follow.</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>Barely managed to hand something. The work may or may not address the topic but who can tell since it is so poorly written.</td>
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**Due dates and late policy:** All assignments will have a

**Late assignments will be marked down 10% for each day late.**

**NOTE:** It is your responsibility to keep on track with content and activities throughout the term.

**Blog posts:** Blogs will be required throughout the quarter, and will focus on Antarctic ecosystems, wildlife and case studies of conservation issues in the Antarctic. Active participation is required. There will be 6 blog posts required worth 20 points each; 10 points for an original, substantive comment, and 10 points for two substantive response comments. These will be graded based on quality and content of posts. Debates and active discussions are encouraged, but disrespectful comments will not be tolerated. Two blogs will be required to be written while in Antarctica and posted immediately on your return to the USA. Each blog is to be approximately 300 words and your responses are to be 75 to 100 words each.

**Literature reviews (2):** Based on primary sources, you will write two literature reviews (1) related to your chosen research area and (2) on a conservation challenge facing Antarctica. Each paper will 2,000 words to 3,000 words excluding references. Topic ideas must be submitted to the instructor for
approval during Week 3. Papers will be graded based on the quality of the literature review, how well differing perspectives are critically evaluated, and whether potential biases are addressed with respect to the topic.

**Research paper:** You will write a research paper that presents the findings of your research project in Antarctica. It will be approximately 3,500 words and consist of an introduction, background, method, results, discussion and conclusion.

**Research presentation:** You will develop a 15 minute presentation on your preliminary research findings. The presentations will be made on the voyage back from Antarctica and presented to passengers, crew and faculty and other students.

**Poster:** To accompany your presentation you will develop an e-poster that will outline your research and findings and this will be posted on Canvas. The best posters will be displayed in F&W as part of a display about our Antarctic term.

**Potential Research Topics:**

Photo-ID of humpback whales. Collecting photos on both ‘legs’ of the cruise and doing simple mark-recapture techniques to see if we see individuals more than once and then comparing the photos that we collect to our catalog of previously seen animals to make matches between years and locations.

Visual surveys. We will do standardized survey tracks in places that we have operated in over the years and collect sightings information to look at distribution and abundance in different bays and in different ice conditions.

Penguin colony counts: we will be able to visit colonies multiple times and in a very nice north-south gradient as well as in the Weddell Sea and Antarctic peninsula. We can set up studies that compare different species compositions between locations, proportions of chicks fledging etc. and compare how different species colonies look and behave. from north to south, and west to east how does chick rearing differ.

Aerial surveys: We will have a drone with us as well that will collect geo-referenced spatial imagery that we can do counts of seals, penguins, vegetation, etc. that could be a student project.
Students with Disabilities:
Accommodations are collaborative efforts between students, faculty, and Disability Access Services (DAS). Students with accommodations approved through DAS are responsible for contacting the faculty member in charge of the course prior to or during the first week of the term to discuss accommodations. Students who believe they are eligible for accommodations but who have not yet obtained approval through DAS should contact DAS immediately at 541-737-4098.

Student conduct:
The University and our Department expect students to conduct themselves and to perform their work in a professional, honest, ethical, and civil manner. Students are expected to respect the University’s regulations regarding civility, and to treat all others with the same respect as they would want afforded to themselves. Disrespectful behavior to others (e.g., harassment, personal insults, or inappropriate language) or disruptive behaviors in the course (e.g., persistent and unreasonable demands for time and attention both in and out of the classroom) is unacceptable and can result in sanctions as defined by Oregon Administrative Rules Division 015 Student Conduct Regulations.

Academic integrity:
Students are expected to comply with all regulations pertaining to academic honesty. Academic dishonesty is defined as an intentional act of deception in which a student seeks to claim credit for the work or effort of another person or uses unauthorized materials or fabricated information in any academic work. Engaging in any of the above described activities are grounds for dismissal from and earning a failing grade in this course. YOU are responsible for knowing the rules, regulations, and ethics associated with these policies. For more information on plagiarism, please visit: http://osulibrary.oregonstate.edu/instruction/classign/Plagiarism.html, or contact the office of Student Conduct and Community Standards at 541-737-3656.

In this course, evidence of plagiarism or academic dishonesty, no matter how minor, will lead to a grade of zero for that assignment. Other consequences may include referral of the charge to Student Conduct and Community Standards, failing the course, or being dismissed from the course.

PLEASE NOTE: Our working definition of plagiarism includes copying any text directly from another source on any assignment or discussion board including online quizzes, unless you are defining a
formal term. **It is inappropriate to copy text from other sources in your literature review even if you provide the citation,** unless you use quotation marks - but as I note in the assignment guidelines, direct quotations are rarely appropriate in scientific writing. **Also note that minor changes to wording may not be sufficient to avoid the charge of plagiarism,** so don’t take chances - use your own words and sentence structure!

For more information on how to avoid plagiarism in your writing, please visit: [http://osulibrary.oregonstate.edu/instruction/tutorials/engage/cite/help.htm](http://osulibrary.oregonstate.edu/instruction/tutorials/engage/cite/help.htm).

Here is another good website with examples on how to avoid plagiarism: [http://www.northwestern.edu/provost/students/integrity/plagiarism.html](http://www.northwestern.edu/provost/students/integrity/plagiarism.html)

Note that other disciplines may use direct quotations more extensively than we do in scientific writing, so don’t use the examples on those websites as evidence that we favor direct quotation!

**Technical assistance:** If you experience computer difficulties, need help with downloads, or you encounter errors or problems while in the online course, contact the OSU Help Desk: 541-737-3474; osuhelpdesk@oregonstate.edu, or visit [http://tss.oregonstate.edu/OCH/](http://tss.oregonstate.edu/OCH/).

**Course Evaluation:**
We encourage you to provide an online evaluation of this course at the end of the term. Instructions will be sent to you, you will need to login to “Student Online Services” to respond to the online questionnaire. The results on the form are anonymous and are not tabulated until after grades are posted.