NOTE to prospective students: This syllabus is intended to provide students who are considering taking this course an idea of what they will be learning. A more detailed syllabus will be available on the course site for enrolled students and may be more current than this sample syllabus.

**FW 419/519 The Natural History of Whales and Whaling 3 credits**

- Instructor Contact Information
  Angie Sremba
  Srembaa@onid.oregonstate.edu
  Email to set up face-to-face or phone/skype discussions

For more information, contact: BRUCE DUGGER, NASH 166, 541-737-2465

- Course Credits
  This class combines approximately 90 hours of instruction/laboratory, multimedia, readings, assignments and a final discussion board debate for 3 credits. This is equivalent to a 3-credit lecture course.

- Course Catalog Description: FW 419. THE NATURAL HISTORY OF WHALES AND WHALING (3).
  Addresses the natural history of whales as a unique example of adaptation in an evolutionary lineage, and the history of whaling as a general example of the failings of international resource management. **PREREQS:** Some background in vertebrate ecology and evolution or genetics is recommended.

- Prerequisites, Co-requisites and Enforced Prerequisites
  One year of introductory biology (mandatory). Some background in vertebrate ecology, evolution or genetics is strongly recommended. Familiarity with Microsoft Excel is strongly recommended, as this program will be used for some of the laboratory assignments.

- Course Description
  During the last 200 years, whaling expanded into a global industry, systematically driving most populations of baleen whales (suborder: Mysticeti) and some larger toothed whales (suborder: Odontoceti) to near extinction. This virtually eliminated an entire trophic level of the marine ecosystem, particularly in the Southern Hemisphere. Although viewed by some as a relic of the past, whaling remains a strong imperative for some native people and national interests. The course addresses the natural history of whales as a unique example of adaptation in an evolutionary lineage, and the history of whaling as a general example of the failings of international resource management.

- Communication
  Please post all course-related questions in the General Discussion Forum so that the whole class may benefit from our conversation. Please email your instructor for matters of a personal nature. I will reply to course-related questions and email within 24-48 hours. I will strive to return your assignments and grades for course activities to you within five days of the due date.
-Measurable Student Learning Outcomes
FW419 undergraduate students will be able to:
Describe the natural history of whales and outline and synthesize how this natural history is an example of adaptation in an evolutionary lineage.
Evaluate the history of whaling as a general example of international resource management failure leading to the commercial extinction (and for some populations, functional extinction) of multiple cetacean stocks: a ‘tragedy of the commons’ on a global scale.
Examine, question and appraise aspects of the weekly reading and topic during class discussions via Canvas Discussion board.
Generate reports and laboratory assignments using critical thinking and some references from the primary literature.
Integrate differing views in the context of the class debate.

In addition FW519 graduate students will be expected to:
Make extensive use of primary literature in assignments, critically appraise the viewpoints presented and demonstrate a willingness to provide additional leadership during the class debate.

Link to Statement of Expectations for Student Conduct
Student conduct: [http://studentlife.oregonstate.edu/studentconduct/](http://studentlife.oregonstate.edu/studentconduct/)

1. Academic honesty: Lab reports and essays are expected to be entirely the student’s own work. Plagiarism from other students, online sources, or references is not acceptable (please review the “Plagiarism: what is it?” section in the course information area). Where concepts from literature etc are used, clearly attribute these to their sources and rewrite these in your own words. Students are expected to collaborate for the final debate in terms of generating references and arguments/rebuttal to be used, however the actual writing of the text used for the student’s post should be their own.

2. Expectations for civility and behavior in class: Class members should assist and encourage other students with learning course concepts through discussion board posts on the weekly material (see Evaluation of Student Performance). Students are expected to recognize and value the ideas of others, and to disagree respectfully and civilly on the discussion board without demeaning the personal characteristics of the original poster.

3. Language use: Students should use formal English and spellchecking when composing assignments, essays and debate posts (see Evaluation of Student Performance). Because the discussion board posts are taking the place of informal on-campus class discussion, colloquialisms and less formal writing are allowed, but spelling should still be checked, and the post should be meaningful and related to class material.

-Student Assistance
This course will be delivered via Canvas where you will interact with your classmates and with your instructor. Within the course Canvas site, you will access the learning materials, such as the syllabus, class discussions, assignments, projects, and quizzes. To preview how an online course works, visit the [Ecampus Course Demo](http://studentlife.oregonstate.edu/studentconduct/).

For technical assistance, please visit [Ecampus Technical Help](http://studentlife.oregonstate.edu/studentconduct/).

For course-related enquiries: If your query is of a general nature, please post in the “General Discussion” forum of the discussion board so that other students can benefit from the answer to your question. If your query is of a private matter, please email the course instructor using the contact information provided. The instructor will reply to queries within 48 hours, otherwise please email again.
-Technical Assistance
If you experience computer difficulties, need help downloading a browser or plug-in, assistance logging into the course, or if you experience any errors or problems while in your online course, contact the OSU Help Desk for assistance. You can call (541) 737-3474, email osuhelpdesk@oregonstate.edu or visit the OSU Computer Helpdesk online.

- COURSE DEMO
- GETTING STARTED

COURSE SITE LOGIN INFORMATION
Information on how to login to your course site can be found HERE.

-Statement Regarding 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 +1-541-737-4098.

-Learning Resources
There is no required textbook for this course. Specific papers from the primary literature will be assigned weekly. Students can find additional literature for their assignments by accessing library resources at http://ica.library.oregonstate.edu/subject-guide/1271-OSU-Libraries-How-To-Guide and http://osulibrary.oregonstate.edu/ecampus. Recommended general reading for background information includes:

The following textbook can be accesses online through the OSU Library or purchased:

Other textbooks available for 2 day checkout from the OSU Library:


NOTE: For textbook accuracy, please always check the textbook list at the OSU Bookstore website. Sample syllabi may not have the most up-to-date information.

-Policy on incompletes
An incomplete will only be granted in emergency situations and if the student is passing the course at the time of the request and completes 2/3 of the course requirements before the end of the quarter (including the class debate). The incomplete will be run on a strict 10-week schedule that starts immediately after the end of the quarter, and no further extensions will be granted, so working on your assignments as you can is a very good idea if an incomplete is granted.

-Schedule
Topics and assignments are subject to change. Please see Detailed Course Schedule document for greater detail.

This course is offered through Oregon State University Extended Campus. For more information, contact:

Web: ecampus.oregonstate.edu  Email: ecampus@oregonstate.edu  Telephone: 800-667-1465
<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Lab/debate/essay assignments</th>
<th>Discussion board</th>
<th>Assignments due</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Evolutionary origin of cetaceans and adaptations</td>
<td>Lab 1 – On adaptations (multimedia of cetacean necropsy and skeletons)</td>
<td>Introduction biographical post</td>
<td>End of Week 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lab 1</td>
</tr>
<tr>
<td>2</td>
<td>Taxonomy, diversity and species concepts</td>
<td>Lab 2 – On species identification and molecular taxonomy (DNA surveillance)</td>
<td>Week 2 material</td>
<td>End of Week 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Essay topic and summary</td>
<td></td>
<td>Lab 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Essay topic and summary</td>
</tr>
<tr>
<td>3</td>
<td>Migration; discussion board debate topic, rules, and team assignments</td>
<td>Lab 3 – On cetacean migration (multimedia of cetacean migration)</td>
<td>Week 3 material</td>
<td>End of Week 3</td>
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<tr>
<td></td>
<td></td>
<td>Week 3 debate prep</td>
<td></td>
<td>Lab 3</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Week 3 debate prep</td>
</tr>
<tr>
<td>4</td>
<td>Foraging and trophic ecology</td>
<td>Lab 4 – Are whales eating all of the fish?</td>
<td>Week 4 material</td>
<td>End of Week 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Week 4 debate prep</td>
<td></td>
<td>Lab 4</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Week 4 debate prep</td>
</tr>
<tr>
<td>5</td>
<td>Phylogeography of cetaceans</td>
<td>Lab 5 – On life history parameters</td>
<td>Week 5 material</td>
<td>End of Week 5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Week 5 debate prep</td>
<td></td>
<td>Lab 5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Week 5 debate prep</td>
</tr>
<tr>
<td>6</td>
<td>Life history parameters of whales</td>
<td>Essay Draft</td>
<td>Week 6 material</td>
<td>End of Week 6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Week 6 debate prep</td>
<td></td>
<td>Essay draft</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0 to 30 min of PBS documentary &quot;Into the Deep&quot;</td>
<td></td>
<td>Week 6 debate prep</td>
</tr>
<tr>
<td>7</td>
<td>History of whaling and management, discussion board debate topic,</td>
<td>Week 7 debate prep</td>
<td>Week 7 material</td>
<td>End of Week 7</td>
</tr>
<tr>
<td></td>
<td>rules, and team assignments</td>
<td>30 to 60 min of PBS documentary &quot;Into the Deep&quot;</td>
<td></td>
<td>Week 7 debate prep</td>
</tr>
<tr>
<td>8</td>
<td>Modeling the past and future of whales: The RMP and comprehensive</td>
<td>Week 8 debate prep</td>
<td>Week 8 material</td>
<td>End of Week 8</td>
</tr>
<tr>
<td></td>
<td>assessment</td>
<td>60 to 90 min of PBS documentary &quot;Into the Deep&quot;</td>
<td></td>
<td>Final Essay</td>
</tr>
</tbody>
</table>

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<th>Assignments due</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Whales, whaling, and ecosystem change</td>
<td>Lab 6: On biogeographic forces 90 to 120 min of PBS documentary &quot;Into the Deep&quot;</td>
<td>Week 9 material</td>
<td>Lab 6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Week 9 debate prep</td>
</tr>
<tr>
<td>10</td>
<td>Debate preparation (dead week)</td>
<td>Week 10 debate prep</td>
<td>Week 10 material</td>
<td>Week 10 debate prep</td>
</tr>
<tr>
<td>11</td>
<td>Whaling debate (final)</td>
<td>Individual debate posts</td>
<td>Mon-Fri 9th-13th June</td>
<td>Individual debate posts</td>
</tr>
</tbody>
</table>

**Evaluation of Student Performance**
Grading will be based on participation (10%), lab write-ups (50%), an essay (20%) on a topic dealing with conservation or management (to be discussed with the course instructor), and an organized discussion board debate on the sustainability of whaling (20%). Graduate students (FW519) will be held to a higher standard on the essay, lab write-ups and leadership role in the debate as indicated in the learning outcomes for this group. All assignments/essays/discussion board posts except the Student Discussion Board Debate (see below) will be due on Sunday of the week they are due, at 11:59pm PST.

Grading will be done on a straight scale, as follows:

- 94-100% A
- 80-83% B-
- 77-79% C+
- 74-76% C
- 70-73% C-
- 64-66% D
- 60-63% D-
- <60% F

**Participation 10%**: Students will make at least one original post each week on the discussion board (>100 words) about points from the lecture/readings/lab that the student finds interesting or seeks clarification on. Students will also be required to post at least one reply to another student or the instructor (>100 words), based on the points raised in the original post (replying to a comment on the student’s own post is also acceptable). It is expected that both original posts and replying to other students on material from that week’s topic will help students formulate their thoughts for the lab assignment from that week, and also give them practice in the skills needed for the Student Discussion Board Debate (see below). Students are also expected to post any general queries they have on the discussion board, as answers may benefit other students in the class.

Grading rubric - 10 weekly discussions @ 1 point each:
- 1 points: Made an original post addressing points from the reading or topic that week of at least 100 words, and replied to another student (>100 words) by 11:59pm Sunday.
- 0.5 points: Failed to make original post of at least 100 words or relevant to assigned topic or reading, or failed to make a reply to another student of at least 100 words by 11:59pm Sunday.
- 0 points: Failed to make an original post and reply to another student following the guidelines above by 11:59pm Sunday.

**Lab assignments (5 x 10%) 50%**: The course schedule includes 6 lab assignments. Grades from the best 5 out of 6 lab assignments will be used, each worth 10%. Detailed weekly guidelines on the assignments will be provided, but in general 3-4 pages of text (excluding the bibliography, tables and figures), use of references, and...
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figures where appropriate are expected. Late assignments will result in a deduction of 2 points if submitted less than a week late and 3 points the week after that. NO assignments will be accepted that are more than two weeks late. Assignments should be submitted via Canvas.

Lab 1 - On adaptations
Lab 2 - On species identification and molecular taxonomy (DNA surveillance)
Lab 3 - On cetacean migration
Lab 4 – Are whales eating all the fish?
Lab 5 - On biogeographic forces
Lab 6 - On life history parameters

Grading rubric – best 5 out of 6 lab assignments @ 10 points each
10 points: Contains the assignment-specific information and analysis in required format (4 points); thoroughly examines aspects of the topic and is insightful (i.e. goes beyond the obvious) (2 points). Writing shows clarity and structure – including introduction, conclusion and paragraphs (2 points), uses references correctly (1 point) and contains few noticeable spelling and grammatical errors (1 point). Points will be deducted when proficiency in categories above is not demonstrated, when feedback from previous assignments is not followed, or under the guidelines for lateness mentioned above.

Essay 20%: Students will consult with the instructor sometime in the first two weeks to find a whales/whaling topic that deals with conservation or management, for which adequate primary literature or analysis tools are available for the student to write an essay. The topic, and a paragraph summary of why the topic was chosen, will be due in Week 3. An essay outline will be due in Week 6, summarizing the main points that the student will be addressing in the essay. The instructor will provide feedback on the outline, which will be worth 2.5 points. A draft will be due in Week 8, which the instructor will also provide feedback on (2.5 points) so this can be incorporated into the final essay due in Week 10 (the instructor does not promise to catch all the issues that may impact your final grade, so make sure to read through the final version critically on your own). The final essay is expected to be 6-8 pages of text (excluding the bibliography, tables and figures: 8-12 pages with 1-2 figures and use of references). Essays should be submitted via Canvas.

Grading rubric – 20 points
Outline (2.5 points): Title of essay and list of the 5-6 points to be addressed in the essay, with a brief (2-4 sentence) description of each point (1 point). Points are relevant to topic (1 point), and outline contains few noticeable spelling and grammatical errors (0.5 points). A late outline will result in a deduction of 1 point if submitted less than a week late. No points will be awarded after that.

Draft (2.5 points): Introduction, 5-6 paragraphs and conclusion (1 point). Some use of references (1 point). Draft contains few noticeable spelling and grammatical errors (0.5 points). A late draft will result in a deduction of 1 point if submitted less than a week late. No points will be awarded after that.

Essay (15 points): Contains five-six paragraphs relevant to the topic (6 points); thoroughly examines aspects of the topic and is insightful (i.e. goes beyond the obvious) (3 points). Writing shows clarity and structure – including introduction, conclusion and paragraphs (4 points), uses references correctly (1 point) and contains few noticeable spelling and grammatical errors (1 point). Points will be deducted when proficiency in categories above is not demonstrated, or if feedback is not followed. A late essay will result in a deduction of 3 points if submitted less than three days late (by Wednesday of finals week, 11:59pm PST). No points will be awarded after that.
Student Discussion Board Debate 20%
Moot: *That whaling is sustainable.* Students will be assigned into teams, which will include a mix of both graduate and undergraduate students, in Week 3. The side ("anti-whaling"/"pro-whaling") of each team will be revealed in Week 7.

Format: “The Karl Popper debate, named after the famed philosopher, was created by the Open Society Institute as a flexible team debate format. It focuses on relevant and often deeply divisive propositions, emphasizing the development of critical thinking skills, and tolerance for differing viewpoints.”

Overall structure:
This debate will take place over one week on the discussion board, with students from the positive and negative teams taking turns to post mini-essays (of approximately 1,000 words, including references). Each student will be required to post one mini-essay on their scheduled day (see example posting format below) by 11:59pm PST. Student Discussion Board Debate posts must occur on the day assigned for each student, or no points may be granted for the individual post.

The first students from each team will be expected to define the moot and provide an outline of their team’s arguments. Subsequent students will be expected to expand on these arguments, as well as provide rebuttal to points made by previous speaker of the opposing team. The final students from each team will also give rebuttal, as well as be expected to provide a summary of their team’s arguments, and any rebuttal points mentioned during the debate.

References will need to be provided for any statements of facts mentioned in the mini-essays, so it is expected that teams will have been in Canvas group correspondence to formulate a plan for the debate and discuss references and arguments before the debate takes place. In addition, teams are expected to assist in forming rebuttal statements to the opposing team, so will need to be in contact during the Discussion Board Debate week. Students are expected to integrate material from topics covered during the course.

The purpose of this debate is to foster the skills needed for successful group collaboration; generate a deeper understanding of the issues surrounding management of the exploitation of whales, and provide practice at using science to challenge alternative viewpoints. The format and team assignment will be discussed in greater detail in Week 3 and again in Week 7.

Example posting format for Week 11 Discussion Board Debate (format may vary depending on class and therefore team size):

<table>
<thead>
<tr>
<th>Day</th>
<th>Student</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>Positive Team</td>
<td>Outline of team’s arguments, definition of moot, additional arguments</td>
</tr>
<tr>
<td></td>
<td>Student 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Negative Team</td>
<td>Outline of team’s arguments, definition of moot, additional arguments</td>
</tr>
<tr>
<td></td>
<td>Student 1</td>
<td></td>
</tr>
<tr>
<td>Tuesday</td>
<td>Positive Team</td>
<td>Rebuttal to Negative Team Student 1, additional arguments</td>
</tr>
<tr>
<td></td>
<td>Student 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Negative Team</td>
<td>Rebuttal to Positive Team Student 1, additional arguments</td>
</tr>
<tr>
<td></td>
<td>Student 2</td>
<td></td>
</tr>
<tr>
<td>Wednesday</td>
<td>Positive Team</td>
<td>Rebuttal to Negative Team Student 2, additional arguments</td>
</tr>
<tr>
<td></td>
<td>Student 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Negative Team</td>
<td>Rebuttal to Positive Team Student 2, additional arguments</td>
</tr>
<tr>
<td></td>
<td>Student 3</td>
<td></td>
</tr>
<tr>
<td>Thursday</td>
<td>Positive Team</td>
<td>Rebuttal to Negative Team Student 3, additional arguments</td>
</tr>
<tr>
<td></td>
<td>Student 4</td>
<td></td>
</tr>
</tbody>
</table>
Negative Team Student 4
Rebuttal to Positive Team Student 3, additional arguments

Friday
Positive Team Student 5
Rebuttal to Negative Team Student 4, summary of team’s arguments and rebuttal points. No new arguments to be presented
Negative Team Student 5
Rebuttal to Positive Team Student 4, summary of team’s arguments and rebuttal points. No new arguments to be presented

Grading rubric – 20 points

Participation (10 points) NB: In order for me to see your "participation", please do all your group work on Canvas rather than emailing other members of your group directly:

Week 3: Individual student posts both a "pro-whaling" and "anti-whaling" point (about a paragraph) and provides references to back up arguments, and their definition of the "moot" (1 point)

Week 4: Work on a definition of the moot that the first poster will define in their post based on definitions submitted by each team member in Week 3. Also discuss possible rebuttal to the points presented in Week 3 - I am mostly looking for you to point out inconsistencies in the arguments, so don't feel obligated to find references for the rebuttal (although, if you do have references, that would be great) (1 point)

Week 5: Individual student posts a second "pro-whaling" and "anti-whaling" point (about a paragraph) and provides references to back up arguments (1 point)

Week 6: Discuss possible rebuttal to the points presented in Week 5 and ways to strengthen arguments - I am mostly looking for you to point out inconsistencies in the arguments, so don't feel obligated to find references for the rebuttal (although, if you do have references, that would be great) (1 point)

Week 7: Discuss possible rebuttal to the points presented in Week 5 and ways to strengthen arguments - I am mostly looking for you to point out inconsistencies in the arguments, so don't feel obligated to find references for the rebuttal (although, if you do have references, that would be great). On Monday of Week 7 the side each team is on will be assigned. Team agrees on order of posters, summarizes arguments and divides them among posters (1 point)

Week 8: Students post drafts of the prepared portion of their posts for team members to comment on (2 points)

Week 10: Students comment on all other student drafts on their team. Discuss possible rebuttal points (1 point)

Week 11 (during finals): Student assists with researching rebuttal to other team's posts (*bonus 2 points*), winning team receives 1 point.

Students who have not participated by the end of Week 5 within their groups will forfeit their debate grade. This is a group exercise, so timely participation is really important for your team's success! Late posts in the participation category might result in no points given for that week.

Individual post (10 points): Thoroughly examines aspects of the topic (1,000+ words) and is insightful (i.e. goes beyond the obvious) (4 points). Writing shows clarity and structure – including introduction, conclusion and paragraphs (4 points), uses references correctly (1 point) and contains few noticeable spelling and grammatical errors (1 point). Points will be deducted when proficiency in categories above is not demonstrated. Late debate posts might not be awarded any points.

NB: This is a scientific debate so avoid "emotive attacks" - as scientists we have to do our best to remain neutral, even if an issue makes us feel morally uncomfortable. If funding agencies and the public believe that our science is compromised by personal agendas, this can have lasting ramifications for their acceptance of the science (think "climate change"!). e.g. You might find whaling culturally abhorrent, but that doesn't mean it is not biologically sustainable. Make sure to ground arguments in science, not rhetoric. A valid question is to ask
how culturally important is it? But making value judgments on cultural practices is more in the philosophy area than science.

Student Evaluation of teaching
The online Student Evaluation of Teaching form will be available in week 9 and close at the end of the finals week. Students will be sent instructions via ONID by the Office of Academic Programs, Assessment and Accreditation. Students will log in 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. Course evaluation results are very important and are used to help improve courses and the learning experience of future students. Results from questions are tabulated anonymously and go directly to instructors and unit heads/supervisors. Unless a comment is “signed,” which will associate a name with a comment student comments on the open-ended questions are anonymous and forwarded to each instructor. “Signed” comments are forwarded to the unit head/supervisor.

REFUND POLICY INFORMATION
Please see the Ecampus website for policy information on refunds and late fees.

Plagiarism
You are expected to submit your own work in all your assignments, postings to the discussion board, and other communications, and to clearly give credit to the work of others when you use it. Academic dishonesty will result in a grade of “F.”

Link to Statement of Expectations for Student Conduct:
http://arcweb.sos.state.or.us/pages/rules/oars_500/oar_576/576_015.html