Syllabus
WILD 2200 -- Ecology of our Changing World
Fall, 2017
Instructor: Fee Busby
Office: BNR 275
E-Mail: fee.busby@usu.edu

Class meets Tuesday and Thursday; 3:00 – 4:15 pm; in Fine Arts-Visual Room 150

Course Overview

Catalogue Description: Foundations of ecological and evolutionary relationships of organisms with other organisms and with the physical environment, emphasizing populations, communities, and ecosystems. Integration of basic science with applications of science to understanding human interactions with the environment. 3 Credits, BLS.

This course introduces you to how ecologists describe and study the natural world with an ongoing consideration of the role that humans play in this world. We will investigate the patterns and processes operating in populations, communities, and ecosystems.

Course Objectives:

1. Improve your scientific literacy – understand how science is done. Scientific literacy enables people to ask questions, find and value science-based answers, and seek the appropriate paths of action.

Why should you care about being scientifically literate?

It will help you
- Learn how science is a way of understanding our world
- Learn how scientific knowledge differs from other kinds of knowledge
- Understand issues that you come across daily in news stories and government debates
- Appreciate how science influences your life
- Gain perspective on the intellectual climate of our time

A book I read in the early 1970s (titled Teaching as a Subversive Activity) indicated that a primary purpose of education was to prepare students to become "crap detectors." By this the authors meant that education is about learning to think and interpret for yourself rather than simply listening or reading and accepting what someone else says or writes. It is truly dangerous to depend too much on other people’s opinions and interpretations, whether the “other people” are the Sierra Club, Southern Utah Wilderness Alliance, BP (British or Beyond Petroleum), your elected representatives, and/or your professors (including me)! Research the issues, think, form your own opinions, listen to others, challenge others, rethink, develop your own views, and act accordingly.

2. Improve your ecological literacy so you may better understand life in our ever changing world. Ecological literacy in a nutshell provides a basis to understand the fundamental relationships that occur among different organisms and their environment.

Why should you care about being ecologically literate?

It will help you
- Understand the ecological principles (which are physics, mathematical, and chemical based) upon which life on earth operates.
- Interpret issues that you and the world are confronted with today as well as new issues that will develop in the future
- Analyze ecological consequences of various individual and societal actions
- Make informed, rational decisions based on knowledge
- Better appreciate in world in which you live
Lectures: This course will be primarily based on lectures and discussion. Attendance will not be taken, but history shows that students who attend class and engage in lectures do better on tests. As you would suspect, your grade will reflect the effort you devote to this class. We will periodically do exercises in class to help you understand the material.

There is no required textbook for this class. I have prepared power point presentations that will serve as your primary information source for the class. I will post power point presentations on Canvas prior to the material being covered in class. The power points provide a guide for all of us. You may print these power points and take notes on them or you may simply review them on line. Material not covered on the power points will often be discussed. Taking notes in class is important.

Questions: Please feel free to ask questions at any time if you fail to understand something OR if you disagree with something. If I feel the question is getting us off the point, I will suggest you and I discuss it later, but I will try not to discourage questioning. I will be questioning you as well. As I lecture, I will be asking you questions. Sometimes I will pick a name from the class list. Sometimes we will ask the class instead of a person, but if nobody volunteers an answer I will select from the class role.

Written Assignments:

Ecology-related Articles (Newspaper and Magazine), Scientific Article Summaries, Videos, etc.: I believe in students learning from current events. As such you will earn 15 points for reading and reporting on ecology-related articles from newspapers and magazines. In total these reports count for approximately 1/3rd of your grade. To earn maximum points, you will need to turn in 14 reports, but I encourage you to read a newspaper every day. You may access articles on line. If you obtain articles on-line, provide the web address. I do not need a copy of the article.

Reports should be about one page in length. Your report should include (1) the source of the article (Salt Lake Tribune; Time Magazine; web site, YouTube, etc.) (2) the date the material was published; (3) a brief review of the article, and, (4) most importantly, your discussion of how the article relates to something we have studied in class.

Sources of newspaper articles and summaries of scientific papers:

![Image](http://mountainwestnews.org/)

For YouTube or TedTalks videos, do a Google or other search engines for “YOUTube Ecology or TedTalks Ecology; etc. The more precise the term you use, the more likely the resulting choices will contain the subject matter you are interested in.

Reports must be typed (word processed). It works best for me if you turn in a hard copy during class. If you turn in on Canvas, please submit as a word or PDF document. Grading of all written assignments will be based soundness of your discussion, on scientific content, on writing clarity, and proper citation of your source(s). As in the real world, knowledge is meaningless if you cannot effectively and clearly communicate what you know. This is your opportunity to develop that skill.

Note, as indicated above, you need to do 14 reports – 1 per week. I will accept 1 reports per week. If you miss a week, you forfeit the points.
Exams: There will be three exams, two midterms and a final. All exams will be comprehensive. Exams will be written and may include multiple-choice, fill-in-the blank, matching, true-false, short answer, and essay questions. As with the written assignments, you must write your answers carefully and clearly. Full credit depends on an answer being concise, as well as complete with respect to the level at which the topic was presented in class. And I must be able to understand what you are saying (grammar) and read your answer (handwriting).

In general, exams may be taken only during the assigned period. Only in the case of unusual, unforeseeable circumstances will I consider a makeup exam unless prior arrangements have been made. Additionally, prior approval is not guaranteed – you must have a valid reason for missing an exam.

Grading:

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<tr>
<th>Article Type</th>
<th>Points</th>
<th>Total Possible</th>
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<tbody>
<tr>
<td>2 midterm exams</td>
<td>100 points each</td>
<td>200 points</td>
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<tr>
<td>Final exam</td>
<td>200 points</td>
<td></td>
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<tr>
<td>14 Articles or Video Reports</td>
<td>15 points each</td>
<td>210 points</td>
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<tr>
<td>Total Possible</td>
<td>610 points</td>
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<tr>
<th>Grade</th>
<th>Percentage</th>
<th>Points</th>
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<tbody>
<tr>
<td>A</td>
<td>93 to 100</td>
<td>567 - 610</td>
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<tr>
<td>A-</td>
<td>90 to &lt; 92.9</td>
<td>549 - 566</td>
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<tr>
<td>B+</td>
<td>88 to &lt; 89.9</td>
<td>537 - 548</td>
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<tr>
<td>B</td>
<td>83 to &lt; 87.9</td>
<td>506 - 536</td>
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<tr>
<td>B-</td>
<td>80 to &lt; 82.9</td>
<td>488 - 505</td>
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<tr>
<td>C+</td>
<td>78 to &lt; 79.9</td>
<td>476 - 487</td>
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<td>C</td>
<td>73 to &lt; 77.9</td>
<td>445 - 475</td>
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<tr>
<td>C-</td>
<td>70 to &lt; 72.9</td>
<td>427 - 444</td>
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<td>D</td>
<td>60 to &lt; 69.9</td>
<td>366 - 426</td>
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<td>F</td>
<td>&lt; 60</td>
<td>&lt; 365</td>
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Academic (Dis)honesty: This course will have zero tolerance of cheating and plagiarism. Also read and believe the statement on "Academic Integrity – The Honor System" (http://www.usu.edu/policies/PDF/Acad-Integrity.pdf). In brief, academic dishonesty is not only grounds for failing the course, but potentially for being expelled from the University.

Students With Disabilities: If you have any disability that requires some accommodation, such as the use of a reader, note-taker, interpreter, alternatives to print media (e.g., Braille, large print, or audio format), or extra time for exams, the University and I are more than happy to accommodate you to the fullest extent possible. You must, however, document your disability and needs at the Disability Resource Center in the University Inn, room 101 and talk to me as soon as possible.
## Approximate Class Schedule

Dates of exams are set. Dates we cover material and material we cover may change.

<table>
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<tr>
<th>Date</th>
<th>General Topics</th>
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| **August 29** | Class orientation, introduction to ecology and science  
Thinking about change—Technology and Human population  
Population ecology – growth and structure,  
Population regulation  
Interactions of organisms with their environment  
Current Issues – predators (wolves in Yellowstone, etc.) |
| **September 28** | First Exam  
Ecosystem ecology – energy flow, nutrient cycling, food chains and webs, tropic pyramids  
Evolution and how evolution relates to ecology  
Current Issues -- Evolution today |
| **October 3**  | No Class – Friday Classes meet on Thursday.                                                                                                                                                                       |
| **October 19** | Second Exam                                                                                                                                                                                                       |
| **October 31** | No Class (instructor has a conflict)                                                                                                                                                                               |
| **November 2** | Species diversity and abundance – threatened and endangered species; invasive species  
Physical and biological environment – biosphere, biomes  
Current Issues – global climate  
Current Issues – western forest and insects; western rangelands, weeds, and fire  
The water cycle  
Current Issues – water withdrawal, minimum stream flow, floods, aquatic organisms |
| **November 8** | Final Exam; Thursday, 1:30-3:20 p.m.; regular class room (Fine Arts-Visual 150)                                                                                                                                 |
| **December 14** | Final Exam; Thursday, 1:30-3:20 p.m.; regular class room (Fine Arts-Visual 150)                                                                                                                                 |