Welcome to Conservation Biology Field Laboratory. This one-unit course is designed to introduce you to some of the issues, tools, and local areas relevant to conservation biology. You must be concurrently enrolled in 406R or 506R, or have special permission from the instructor.

**Instructor**
Kevin E. Bonine, Ph.D., kebonine@u.arizona.edu
Office Hours in BSE113, Wed 3-4pm and Thurs 4-4:50pm, or by appointment.
Office phone: 626-0092, Home phone: 751-1349 (please call before 9pm or after 7am)

**Graduate Teaching Assistant**
Mary Jane Epps, mycota@gmail.com
Office hours: Tues 11-noon in Marley 701, and by appointment.

**Meeting Times**
Friday 1300-1600h. Scheduled to meet in KOFFL 410 but see syllabus and course website for actual meeting location each week. Also see lab schedule for lengthened labs and multi-day trips.

**Web Site**
We will maintain a course website (follow http://eebweb.arizona.edu/eeb_course_websites.htm) with updated announcements, readings, etc.

**406L Course Work**
Attendance & Participation (ten ‘labs’ with variable point values) 200 points
Short Written Assignments (three of ten at 33 points each) 100 points
Total Points: 300

**Graduate Student 506L Course Work**
Same as 406L with the addition of:
With instructor approval, a proposed small project of your choosing OR
Develop a field lab for teaching conservation biology. You should choose a site and a subject that would be appropriate for use in 406/506 lab. An educational exercise involving data collection and analyses would be ideal. Pretend you are creating a teaching lab experience for this class – hopefully it will get put to use in a future year. Your lab should consist of a relevant handout/exercises, instructions for instructors, references, and proposed itinerary (50 pts).
506L total points are, therefore, 350 points.

**Course Work Details**
The bulk of your grade (2/3) is designed to encourage you to participate in, and take advantage of, the many field trips we have planned. Make-ups are very difficult, as we are often meeting with experts in the field. See below for discussion of make-up work if this is an unavoidable option.

**Short Writing Assignments** (100 total points; 1/3 total grade)
Over the course of the semester, you will have ten potential writing assignments. Please complete and turn in three of these (33 points each) for us to grade. We will grade the first three that you turn in, with the caveat that one of the three must come from a multi-day trip and one of the three
must be turned in before end of October. One third of the grade on the writing assignment will be based on your ability to write effectively in proper English. The other two-thirds will be based on content and your ability to demonstrate knowledge, understanding, and internalization of the material. Assignments are limited to one piece of paper (you may use both sides if you wish) each and are due at the beginning of the next scheduled lab meeting. [Submissions via email are due by 8am the morning of the next lab meeting.] You may be asked to read aloud to your peers and discuss and defend your point of view.

Attendance & Grading
You are expected to attend each lab ready to contribute, prepared to participate, and having read the appropriate material. If unavoidable, missing a three-hour lab, or one of the longer or multi-day labs can be made up under the following onerous conditions:
1. The instructors approve of the reason for the missed lab.
2. The student submit within ten days of the missed lab, a written report relevant to the location and the topic missed. Come talk to KEB about the assigned writing for a given missed lab before you write.

A maximum of 3.3 points of attendance can be made up per page of typewritten (double-spaced 10-12 point font, 1 inch margins) report. For example, if you miss the 11 Sept. trip to Tucson Mtn Park you will be able to earn up to the maximum of 10 points for participation/attendance by writing a 3-page report that discusses the topics we covered on the trip and includes appropriate references cited in the format of Conservation Biology. If you miss a trip worth 20 points, a report that might get maximum credit would have to be 6 pages long, etc. We will award these papers letter grades and adjust the points “recovered” accordingly.

We realize that you have lives (cars do break down, people die, stuff happens). In exceptional cases, and if arrangements are made in advance, we will consider your unique situation.

Grades will generally be distributed as follows (any curving will not be “against you”):

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Letter Grade</th>
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<tbody>
<tr>
<td>≥ 90%</td>
<td>A</td>
</tr>
<tr>
<td>80-89%</td>
<td>B</td>
</tr>
<tr>
<td>70-79%</td>
<td>C</td>
</tr>
<tr>
<td>60-69%</td>
<td>D</td>
</tr>
<tr>
<td>≤ 59%</td>
<td>F</td>
</tr>
</tbody>
</table>

Keep in mind the following, adapted from J.M. Williams (1993, Clarifying grade expectations, The Teaching Professor 7(7):1):

The “A” Student--An Outstanding Student

* Attendance: "A" students have virtually perfect attendance. Their commitment to the class resembles that of the instructor.
* Preparation: "A" students are prepared for class. They always read the assignment. Their attention to detail is such that they occasionally catch the instructor in a mistake.
* Attitude: "A" students have a winning attitude. They have both the determination and the self-discipline necessary for success. They are curious and they show initiative. They do things they have not been told to do.
* Talent: "A" students have something special. It may be exceptional intelligence and insight. It may be unusual creativity, organizational skills, commitment—or a combination thereof. These gifts are evident to the instructor and usually to the other students as well.
* Results: "A" students make high grades on assignments—usually the highest in the class. Their work is a pleasure to grade.

Any student with a documented disability who feels they may need academic adjustments or accommodation is requested to speak with the instructor by the 2nd week of class. All related discussions will remain confidential. Students should contact the S.A.L.T. Center for Learning Disabilities (Old Main, Room 135; 621-1242) or the Center for Disability Related Resources (2nd
and Cherry; 621-3268) prior to discussions with the instructor. These offices will verify the need for special services.

**Safety and Preparedness**

Please come to lab prepared for the weather (sun, rain, wind, cold, etc.) with enough food, water, clothing, and sun protection to enjoy the outing. Close-toed shoes, pants, long-sleeve shirts, and hats are highly recommended for a safe and enjoyable trip. Real dangers, including scorpions, rattlesnakes, cactus spines, etc. should be kept in mind. These threats are actually enjoyable given the appropriate precautions, preparations, and attitude.

Student (mis)behavior, especially in the field, that endangers fellow students, detracts from the respectful learning experience of others, or is deemed unacceptable by the instructors will be grounds for immediate expulsion from the trip and likely the course. We have never needed to invoke this, and we want to keep it that way.

**Money**

On our trip to ORPI/Pinacate/CEDO we need to ask you to pay for a few items. Because instructors are not allowed to collect money from students, you will be asked to pay the Pinacate Biosphere Reserve ($8 for overnight camping) and CEDO ($15-20 for lodging, and $8.50 for an excellent dinner if you choose). Therefore, be prepared to contribute another $36.50 (or at least $28) to your education this semester. Consider it a cheap, memorable textbook.

**Overnight Trip Supplies:**

- Sleeping bag
- Gear for cooler weather and rain
- Collapsible sleeping cot or sleeping pad
- Toiletries
- Utensils, bowl/plate, mug or nalgene bottle
- Lantern (optional or share)
- Tent (optional or share) or rain protection
- Campstove (optional or share)
- Proof of citizenship for US-Mexico border crossing
- A little bit of $cash$

You don’t need to go buy all the stuff on this list if you don’t already have it; most of it can be borrowed or at least rented. For long trips we will discuss ahead of time what meals to bring and tally up what supplies people are bringing to conserve vehicle space.

Please note that the university does not provide medical coverage for students who might become sick or injured on class field trips. You should get personal medical coverage if you do not already have it. **No alcohol or illegal drugs are permitted on field trips.**


**Land/Sea Travel, Beginning June 1, 2009**

- U.S. citizens entering the United States at sea or land ports of entry are required to have documents that comply with the Western Hemisphere Travel Initiative (WHTI), most commonly a U.S. passport, a passport card, a trusted traveler card such as NEXUS, SENTRI or FAST, or an enhanced driver's license. See the complete list of [WHTI-compliant documents](http://www.dhs.gov/xtrvlsec/crossingborders/index.shtml).
Tentative Conservation Biology Lab Schedule 2009, Meets ~Friday 1300-1600 (9 of 14 potential meetings)

28 Aug.  Tumamoc Hill and Introduction, VAN [Lynda Klasky for key] ecological research, study plots, geology, Tucson basin, desert vegetation, invasive species, introductions, assignments, and schedules (10 points)
What conservation research project would you initiate at Tumamoc Hill? Why?

04 Sept  No lab (Labor Day Monday 07 Sept.)

11 Sept. Tucson Mountain Park, Diversity Indices, Species-Area Curves, VAN (10 points)
Why are diversity indices & species area curves useful concepts in Conservation Biology?

18 Sept. No lab

26 Sept. SATURDAY, Mt. Lemmon all day, VAN leave campus 0700h, return 1900h Rex Adams? ~11am, representative from Lab of Tree-Ring Research (20 points)
What do you think should be the objectives and practices of a group called Sky Island Alliance? Why?

02 Oct. Saguaro National Park, Saguaro Census long afternoon, VAN Leave campus 1300, return 2000h (15 points)
xx?

09 Oct. No lab

16-18 Oct. FRIDAY-SUNDAY, Cascabel, San Pedro, 2.5 days, VAN We plan to leave campus at 1300h on Friday the 16th. Return late afternoon to Tucson on Sunday the 18th. (50 points)
xx?

23 Oct. Lancaster or Computer? (10 points)
xx?

30 Oct. Lancaster or Computer? (10 points)
xx?

06-08 Nov. FRIDAY-SUNDAY, Organ Pipe, Pinacate, CEDO, 3 day, VAN leave campus 7am on Friday 07 Nov. return evening of Sunday 09 Nov. (60 points)
What was the most important conservation challenge you observed on this trip? How would you take on this challenge for the benefit of ecosystem preservation?

13 Nov. Sweetwater Wetland, Santa Cruz River, VAN (10 points)
How should discharge of water into the Santa Cruz be managed? By whom?
Joaquim Delgado?

20 Nov.  Tucson Mountains, Wrap Up, Evaluations (10 points) Take City Bus ($1.25)

Come to class with a potential writing-assignment question.
We will decide as a group which to answer.
Please also bring a poem (either from the literature or one you wrote) that
addresses some aspect of Conservation Biology that most interests and intrigues you.

27 Nov.  Thanksgiving Holiday

04 Dec.  No lab

For field trips involving vans we will meet at appointed time at the northwest corner of BSE (4th and Highland).

Don’t Forget: Short writing assignments worth 100 points (33.3 pts x 3/10 assignments; one due before
end October and one must be from a multi-day trip) over the course of the semester. Limited to one
piece of paper for each. Due at the beginning of the next scheduled lab meeting. Graded on content
and writing. You may be asked to read aloud to your peers and discuss and defend your point of view.

Tentative Organ Pipe/Pinacate/CEDO itinerary (06-08 November):
Students will be asked to pay for some of the food and lodging costs incurred in Mexico.

| Entry and Camping at Pinacate | $8   |
| Lodging at CEDO              | $15-20 |
| Dinner at CEDO              | $8.50 (optional) |

Friday 06 November
0700 depart
1030 short hike
1200 lunch picnic
1230 meeting with Organ Pipe staff
1530 cross border into Sonora, Mexico
1700 meet with Pinacate staff
1800 set up camp in Pinacate, cook dinner

Saturday 07 November
0600 explore pinacate, breakfast on the go
0830 break camp, explore pinacate by vehicle
1200 leave Pinacate
1300 lunch in Puerto Penasco ($) 
1400 explore beach and tide pools [check tide charts]
1600 arrive CEDO
1730 dinner at CEDO ($) 
1900 evening presentation at CEDO

Sunday 08 November
0630 breakfast using CEDO kitchen and our food?
0800 explore estuary
1300 leave CEDO, eat lunch on road in van
2100 arrive Tucson