

## **ECOL280: SOCIOBIOLOGY AND EVOLUTION OF COOPERATION FALL 2017**

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### **Class room and meeting times**

The class will take place Mo, Wed, Fri at 10am-10:50am in Biological Sciences West 208.

### **Class topic and goals**

Why do animals and other organisms sometimes compete and sometimes cooperate? How do organisms in groups interact, how do they organize themselves or make group decisions? This course will give you some answers to these questions. We will discuss how social behavior evolves, and how it changes the life style of the animals that display it. We will also discuss whether this research can teach us about human social behavior.

You will not only learn about the diversity of social systems, but also understand how ecology and evolution shape organisms and their behavior. You will learn to read and understand original scientific literature, and to critically discuss it. You will practice to structure and communicate what you have learned, both in conversations in class and by preparing a video presentation. This is an interdisciplinary course, and the readings will give you a variety of views on the evolution of behavior in animals and humans.

### **Course website**

Before the semester starts, or if you are not enrolled, you can get information such as this syllabus on the course website <http://socialinsectlab.arizona.edu/ecol280>.

The website you will be actively using during the course is located on D2L, at [d2l.arizona.edu](http://d2l.arizona.edu). You will be able to access it when the semester starts. You have to check this site regularly to obtain readings and announcements for the class. You can also submit assignments and check your grades there. You can access the site from computers on campus if you don't have one at home. Note that student computer labs also offer printing services if you would like to print out readings. To access your course on D2L you must have a UA NetID and be officially enrolled in the course for at least 24 hours.

### **Textbook**

Gadagkar, R. Survival strategies: cooperation and conflict in animal societies. 1997, Harvard University Press.

The textbook is required but not the only reading. Other reading material will be available online (on D2L). You can find which reading is due for each class in the 'Readings and lecture schedule' on D2L. Note that readings listed there are required, and it is your responsibility to check the website regularly for changes, and to read the reading when it is due. Readings will not always be mentioned in class ahead of time, and content from the readings is relevant for exams, whether or not it was discussed during class. If you have questions about a reading, always ask them – ideally at the beginning of the class session, or otherwise after class or by email.

### **Presenting scientific information: student video shows**

Each student will prepare a short (3-4 min) video presentation on a topic that relates to the class theme (i.e. about a social behavior from an evolutionary perspective). Instructions will be given in class about how to do this using PowerPoint; use of other software is welcomed. Students will receive feedback on draft versions. The topic will be researched in the original scientific literature (at least 4 original scientific papers plus additional materials). The final presentation files will be shown in class.

### **Written assignments**

There will be four written assignments. Some of these will involve researching original scientific papers, summarizing their results, and critically evaluating them. All assignments are short essays (<300 words) that will be graded on content, readability/structure as well as writing style and spelling/grammar. At the end of the semester, you will be allowed to revise and re-submit one of the assignments to get additional points. The deadlines for written assignments are listed on D2L and are firm. All assignments must be uploaded to the respective D2L Dropbox.

In total, students will have to write approximately 4 pages for these homework assignments, one page for the revised assignment, about 10-30 words each for about 25 in-class quizzes (about one per class session, consisting of a single question, see below), and about two pages of writing per each exam (3 total). This, in addition with the writing and organization of information that has to be done for the oral in-class presentations by students, meets the General Education writing requirements.

### **Mini Quizzes**

Frequently you will be asked to answer (in writing) a question about the current reading or the last or current lecture in class.

### **Exams**

There will be three exams (first, mid-term, final). The final exam will cover the whole course (cumulative). The exams are largely 'short answer' format.

### **Grading**

Your final grade will be determined by the percentage of the total number of points you have accumulated from exams, the presentation, assignments, and class participation. You can check your current grade status at any time on the website ([d2l.arizona.edu](http://d2l.arizona.edu)).

<b>Grade calculation</b>	<b>Points</b>	
First exam	10	A: 90-100 %
Mid-term exam	15	B: 80-89 %
Final exam	20	C: 70-79 %
Video project	15	D: 60-69 %
Assignments	20	E (fail): 0-59 %
Quizzes on readings	10	
Class participation	10	
<b>Total points</b>	<b>100</b>	

### **More details on grading**

Class participation: it is very important for almost any career that you may be working toward that you can and do voice your opinion, ask questions, and communicate your knowledge in a group context. Therefore, *in every class*, you should aim to participate in class discussions and have an active conversation with your teacher whenever you have the opportunity. To participate adequately, you will have to have done the reading due for that class and previous classes. If you do this, you will learn more from the class and acquire an important skill. You

will also get (up to) 10 points in your grade. If you are having trouble expressing yourself in class, contact the instructor early on in the semester.

You will be given up to 5 points of your participation grade about halfway into the semester. If you have less than 4 points at that time, you are not likely to get an 'A' for participation unless you work hard at it. If you have 0 points at that time, please speak to the instructor after class to discuss ways you can improve. Neglecting to do this will have consequences for your grade – remember that if you have 0 points total for class participation, that is one grade level you lose of your course grade.

Assignment grading: The written assignments are short essays to practice your writing and literature research skills. They are graded as follows:

1 – Reference list: 3 points total.

2 – Presentation plan: 5 points total. Points for depth, attention to relevance for your audience.

3 – Why understand evolution of cooperation? 5 points total. Points for scientific correctness as well as creativity in coming up with applications.

4 – Know a scientist: 3 points total. Points for information about the person as well as scientific contributions, and describing the impact these contributions made on the field.

5 – Revision: 4 points total. Points for correctly addressing feedback from TA and peers as well as own improvements.

For all of these, 1p is for style/spelling/grammar. 0.5p is for correct citing of resources (which means including journal name, year, volume, and page numbers, as well as title and authors; for non-scientific publications, requirements vary but always include date published and name of the publication as well as author and title). 1p is always for correctly understanding requirements of the assignment (including staying between 200-300 words for assignments 2-5).

Student videos: this is your opportunity to focus on what *you* are really interested in. Start researching your topic early (from the beginning of the semester). Feel free to show a draft of to me or the TA or any classmates at any point. Double-check that the file runs on a PC with sound before you submit the final version. Video presentations will be graded as follows:

- Topic 1 (interesting and appropriate to the class)
- Structure 2 (clear structure, main message/question, conclusion)
- Timing 1 (finished within 4 minutes of starting)
- Visual aids 3 (attractive, uncluttered slides or videos that illustrate your point)
- Content 4 (depth of understanding of your topic, detail presented)
- Presentation 3 (topic made interesting & clear to audience)
- References 1 (at least 4 original papers used)

/overall 15 points

### **Honor's contract**

Honors College students can take this course with an additional honors contract. Such a contract will include additional reading as discussed between student and instructor, as well as a more carefully researched and deeper presentation. Honors contract information is available at <http://www.honors.arizona.edu/future-students/honors-credit-across-campus>.

### **Recommended books (not required)**

Krebs, J.R. and Davies, N.B. An introduction to behavioural ecology. 1993 (3<sup>rd</sup> ed.), Blackwell Science

Wilson, E. O. Sociobiology. 1975 (new edition 2000), Harvard Univ. Press.

## **General issues**

### **Professional Communication**

If you send any emails to the instructor or TA, make sure to mention the name of the class (ECOL280) in the subject line. Also, start your email by addressing the recipient, and end it with a greeting. A professional way to address persons with a PhD is, for example, “Dear Dr Dornhaus”; always end the email with your full name. Yes, that’s also good form for replies in email chains. Re-read your email to check for spelling and grammar errors. Not adhering to these rules will mean that the addressee will get the impression that you are unused to professional communication, and this will probably result in them focusing on your communication style instead of your actual message; this is very detrimental in emails to future employers or mentors, so you should start practicing good habits now. Never assume an email will be answered in less than 3 days.

### **Classroom Behavior Policy**

To foster a positive learning environment, students and instructors have a shared responsibility. We want a safe, welcoming, and inclusive environment where all of us feel comfortable with each other and where we can challenge ourselves to succeed. To that end, our focus is on the tasks at hand and not on extraneous activities (e.g., texting, chatting, reading a newspaper, making phone calls, web surfing, etc.).

For this class, use of a laptop is allowed, e.g. for taking notes or checking online resources relevant to class discussion. However, I expect the laptop to be used almost exclusively for the current class-relevant task. If I notice that your laptop is distracting to other students I will ask you to shut it down. Laptops are not to be used while completing in-class quizzes.

This course supports elective gender pronoun use and self-identification; rosters indicating such choices will be updated throughout the semester, upon student request. As the course includes group work and in-class discussion, it is vitally important for us to create an educational environment of inclusion and mutual respect.

### **Absence Policies**

The UA’s policy concerning Class Attendance, Participation, and Administrative Drops is available at <http://catalog.arizona.edu/policy/class-attendance-participation-and-administrative-drop>.

The UA policy regarding absences for any sincerely held religious belief, observance or practice will be accommodated where reasonable: <http://policy.arizona.edu/human-resources/religious-accommodation-policy>.

Absences preapproved by the UA Dean of Students (or dean’s designee) will be honored. See <http://policy.arizona.edu/employmenthuman-resources/attendance>.

If you are absent for any other reason, this may have negative effects on your grade: in particular, you will likely miss the class quizzes and you won’t be able to participate, lowering your grade for participation. In addition, you will miss the instruction provided in class as well as your opportunity to actively engage with the material. If you miss an exam, you will typically not re-take it; if there was a legitimate reason to miss it and you let the instructor know ahead of the beginning of the exam, your grade point total will be adjusted as if there had been no exam. If you are sick, send the instructor an email immediately (before you miss class or an exam).

Requests for incomplete (I) or withdrawal (W) must be made in accordance with University policies, which are available at <http://catalog.arizona.edu/policy/grades-and-grading-system#incomplete> and <http://catalog.arizona.edu/policy/grades-and-grading-system#Withdrawal> respectively.

### **UA Nondiscrimination and Anti-harassment Policy**

The University is committed to creating and maintaining an environment free of discrimination; see <http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy>. Our classroom is a place where everyone is encouraged to express well-formed opinions and their reasons for those opinions. We also want to create a tolerant and open environment where such opinions can be expressed without resorting to bullying or discrimination of others.

### **Accessibility and Accommodations**

Our goal in this classroom is that learning experiences be as accessible as possible. If you anticipate or experience physical or academic barriers based on disability, please let me know immediately so that we can discuss options. You are also welcome to contact the Disability Resource Center (520-621-3268) to establish reasonable accommodations. For additional information on the Disability Resource Center and reasonable accommodations, please visit <http://drc.arizona.edu>. Please plan to meet with me by appointment or during office hours to discuss accommodations and how my course requirements and activities may impact your ability to fully participate.

Please be aware that the accessible table and chairs in this room should remain available for students who find that standard classroom seating is not usable.

### **Code of Academic Integrity**

Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. The use of the internet or published works to help you solve problems in the assignments completed at home is also encouraged. Otherwise, graded work/exercises must be the product of independent effort. Students are expected to adhere to the UA Code of Academic Integrity as described in the UA General Catalog.

See <http://deanofstudents.arizona.edu/academic-integrity/students/academic-integrity>.

The University Libraries have some excellent tips for avoiding plagiarism, available at <http://www.library.arizona.edu/help/tutorials/plagiarism/index.html>.

Selling class notes and/or other course materials to other students or to a third party for resale is not permitted without the instructor's express written consent. Violations to this and other course rules are subject to the Code of Academic Integrity and may result in course sanctions. Additionally, students who use D2L or UA e-mail to sell or buy these copyrighted materials are subject to Code of Conduct Violations for misuse of student e-mail addresses. This conduct may also constitute copyright infringement.

### **Threatening Behavior Policy**

The UA Threatening Behavior by Students Policy prohibits threats of physical harm to any member of the University community, including to oneself. See

<http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students>.

### **Additional Resources for Students**

UA Academic policies and procedures are available at <http://catalog.arizona.edu/policies>.

Student Assistance and Advocacy information is available at <http://deanofstudents.arizona.edu/student-assistance/students/student-assistance>.

### **Confidentiality of Student Records**

<http://www.registrar.arizona.edu/ferpa/default.htm>

### **Subject to change**

Please note that the information contained in the course syllabus, other than the grade and absence policies, may be subject to change with advance notice, as deemed appropriate by the instructor. This is particularly true of the details in the course schedule. The most up-to-date version of the class schedule (including assignment due dates) can always be found on D2L.