

Function & Evolution of Sex & Sexual Behavior

BIOL 250 / WGST 324 (special topics)

Spring 2020

MW 3:25-4:40

RITA 152

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she/her

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Office Hours: by appointment

I will gladly honor your request to address you by the name and gender pronouns of your choice. Please advise me of this early in the semester via your college-issued email account or in person so that I may make the appropriate notation on my class list.

Texts: (Readings from other sources will also be assigned.)

Roughgarden, J. 2004. *Evolution's Rainbow: Diversity, gender, and sexuality in nature and people.*

Judson, O. 2002. *Dr. Tatiana's sex advice to all creation.*

About the course:

Sex is fundamental: sexual reproduction plays a key role in evolution and so is central to understanding much of biology; sexual behavior – both reproductive and nonreproductive – plays a key role in human life (and as we'll see, the lives of nonhuman animals as well), intersecting with social behavior and context. Yet sexual behavior remains broadly misunderstood, reduced to simplistic stereotypes and misleading generalizations. Moreover, the astounding range of variation in sexual and reproductive behavior across organisms is often vastly underappreciated. In this course, we'll explore this variation in an evolutionary context, placing human behavior in the midst of this astounding diversity.

Course goals:

- Apply evolutionary principles to reproductive and sexual behavior;
- Demonstrate critical thinking about biological perspectives on reproductive and nonreproductive sexual behavior in nonhuman animals, and on gender and sexuality in humans;
- Demonstrate an understanding of the relationship between social environment and sexual and/or reproductive behavior in nonhuman animals, and the individual and the broader society in humans;
- Develop skills interpreting and communicating biological science for diverse audiences.

Overview of what we'll do:

In this course we'll be combining short lectures, readings, short- and long-form writing, and discussion to examine the function and evolution of sex and sexual behavior in an evolutionary context and explore the wide range of diversity in these behaviors in humans and other organisms. We'll start with humans (as the sexually reproducing organism most of us are most familiar with); reflecting on what might be learned from placing human diversity in the broader context of sexual behavior's evolutionary diversity is a thread that will run through the entire semester.

For each topic, we'll have a set of readings; for most topics, you'll complete one or more short, low-stakes writing assignments based on these readings before class (posted to the Oaks Discussion Board), and we'll typically also have some in-class writing time before lecture or discussion, to get our heads into this space.

We'll have 3 take-home exams in which you will be asked to synthesize material in longer essay format.

Throughout the semester, each of us will be working on a "course project", in which we choose a topic related to our overall course goals and delve into it more deeply. The "course project" is also explicitly a communication project; that is, we'll be seeking to not only improve our understanding of these topics, but also our ability to share that understanding with others. We'll start this right from the beginning, by reflecting on what we want to accomplish in the course and who the audience(s) of our projects will be; thus the "Questions & Audience Assignment" and "Final Course Project Presentations" bookend the semester. The final form of the Course Project may vary among us, but for all it will include an essay that connects the project to course material, and an oral presentation.

A word (or two) about the subject matter:

Much of the subject matter in this course has the potential to be uncomfortable, sometimes unexpectedly so. It is absolutely critical that we treat each other with kindness and respect, whether we're engaging in

discussion on-line or in class. When on-line, remember that subtle features of face-to-face communication are lacking, so it is much easier to be misunderstood.

Schedule (subject to change):

Week (dates)	What we'll be talking about, what we'll be reading (R: Roughgarden; J: Judson; other (more may be assigned))	What's due (usually Monday)
1 (1/8)	Introduction: natural vs social science, biology vs culture, nature vs nurture, and the problem false dichotomies	
2 (1/13-15)	Humans as case study: sex, gender, variation R: Chap 18; Fausto-Sterling: Chap 2	low-stakes writing
3 (1/22)	Why sex? Evolution & comparative sexual reproduction (genes, gametes) R: Chap 1, 2; J: Chap 13	low-stakes writing
4 (1/27-29)	Anisogamy & beyond: investment & reproductive behavior R: Chap 4; J: Chap 12	low-stakes writing
5 (2/3-5)	One house or two? Separate sexes (or not) in plants & animals R: Chap 3, 11, 12; J: Chap 11	low-stakes writing Questions & audience assignment
6 (2/10-12)	Getting together: pollination, internal vs external fertilization, variation in reproduction	Take-Home Exam 1
7 (2/17-19)	Reproductive behavior: nonhumans R: Chap 7; J: Chap 3, 4, 5, 8	low-stakes writing
8 2/24-26)	Reproductive behavior: humans R: Chap 13, 14	low-stakes writing
9 (3/2-4)	Sexual conflict, genitalia revisited J: Chap 1, 2, 9	low-stakes writing
10 (3/9-11)	From fertilization → offspring: parenting = reproductive behavior Zuk: Chap 3	low-stakes writing Final project proposals
11	<i>Spring Break</i>	
12 (3/23-25)	Mating systems & social systems: nonhumans R: Chap 5, 6; J: Chap 10	low-stakes writing
13 (3/30-4/1)	Mating systems & social systems: humans TBD	low-stakes writing Proposal comments
14 (4/6-8)	Nonreproductive sex / sex as a social behavior R: Chap 8; J: Chap 11; Zuk Chap 11	low-stakes writing
15 (4/13-15)	People's choice	Take-Home Exam 2
16 (4/20-22)	Final Course Project presentations	Course Projects

Take-Home Final Exam: due at the end of our scheduled Final Exam time: 4/27, 3pm

About Attendance:

Missing class means missing material, discussion, and in-class low-stakes writing. None of these can be made up; it is your responsibility to learn any missed material. Doing well in this class will require active engagement (not just showing up). That said, you are adults and need to learn how to best use your time. Other than the missed material and work (see Grades, above), there is no further penalty for missed classes.

Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, and believes this may affect their performance in the course, is

urged to contact the Dean of Students office for support. See also:
<http://deanofstudents.cofc.edu/student-food-temp-housing-asst/index.php>

Grades:

The grading in this class is based on a different philosophy than you may have encountered in other classes: rather than assign a certain number of points or % value to different activities in the class and then having a formula to calculate the grade, we're going to use a 'specifications' grading scheme.

Ideally, this type of grading is more transparent (you always know what your grade is, without calculating any weighted or partial averages). It also allows you to target your efforts with maximal efficiency (no more wondering 'how much will it change my grade if I do X?'), and removes arbitrary point schemes ('what's the difference between an oral presentation that's a 95% vs. a 93%?'). Philosophically, these grading schemes are also more akin to what we do in the professional world: if your work meets the specifications, then you get credit for it. If it doesn't, you don't. There's not a lot of partial credit in the professional world. Or as Yoda says: "Do or do not. There is no try"

The table below outlines what you need to do to receive different grades in this class. Low-stakes writing assignments are basically graded pass/fail – either you do what was asked or you don't (see Yoda, above). For the low stakes writing and each stage of the Course Project, I'll provide a detailed list of "specifications" that need to be met in the assignment.

When scores fall into more than one column, averages are used (for example, a mix of A and B grades would be an A- or B+).

	A	B	C	D	F
Take-home exams	≥ 90% on all OR overall ave ≥93%	≥ 80% on all OR overall ave ≥ 83%	≥ 70% on all OR overall ave ≥ 73%	≥ 60% on all	<60% on all
Low-stakes writing (both in-class & on-line)	All satisfactorily completed	1 not satisfactorily completed	2-3 not satisfactorily completed	4-5 not satisfactorily completed	> 5 not satisfactorily completed
Course Project (total across all stages, including Question & Audience Assignment, Final Presentation, and all intermediate steps)	0-3 missed specifications	4-6 missed specifications	7-12 missed specifications	13-20 missed specifications	> 20 missed specifications

Now, nobody "meets specifications" all the time – that's just life. The point here is to learn, right? And we learn from mistakes. We have to build that "learning from mistakes" into the grading scheme, somehow. To allow for mistakes that don't doom your grade, specifications grading schemes also involve "tokens" – think of these as opportunities to erase mistakes. You all start with **2** tokens. (Across the semester, there may also be opportunities to earn more.) You may use tokens to do any of the following:

- Erase one missed low-stakes writing assignment
- Erase missed course project specifications (any stage; 1 specification / token)
- Add 2% pts to take-home exam (one token only; if you have a token left at the end of the semester and adding 2% to your one of your take-home exam scores will help you, I'll apply this token for you!)

About Oaks:

I use Oaks for most class business: submitting stuff (assignments, take-home exams, etc.); engaging in discussions outside of class; providing access to content or other materials not found in the texts (including reading assignments); and announcements. Please note that I do *not* post lecture notes or PowerPoint slides from in-class lectures online. Learning to listen, process and take note of critical

information are life-skills you will need to develop; moreover, studies have shown that students actually learn *less* if they have pre-printed slides. Actively engaging your brain during lecture (“active listening”) turns out to be pretty important. That said, we all have those momentary space-outs, so if you ever feel as if you missed something important on a slide, let me know – I’m happy to allow you to review slides at your leisure! I will post any figures that I show in class, so you don’t need to worry about accurately drawing them.

And now, this:

As per College of Charleston Policy 7.6.10, the following information must now appear on all course syllabi. Some of this has already been discussed above, but rules are rules, so here goes.

3.1 Course Title, Course Number, and Section Number

See top of pg. 1

3.2 Course Prerequisites or Co-requisites

Prerequisites = 1 year of biology or permission of instructor

3.3 Semester or Academic Term

See top of pg. 1

3.4 Faculty Name/Instructor of Record and Contact Information

See top of pg. 1

3.5 Course Meeting Places and Times

See top of pg. 1

3.6 Faculty Office Hours

See top of pg. 1

3.7 Instructional Objectives and Student Learning Outcomes

I think these roughly correspond to what I call Course Goals, pg. 1.

3.8 Attendance Policies

See About Attendance, pg. 2

3.9 Grading Policy

If this refers to the break-down of how grades are calculated, see Grading, pg. 3. Otherwise, my policy is to grade as carefully and fairly as I can. If you ever have any questions about any of your grades, please see me.

3.10 Required and Optional Textbooks, Equipment, and Technology

See Texts, pg. 1.

3.11 Accommodations for Students with Disabilities

Please also let me know early in the semester if you need extra time on exams or other accommodations. You can find information about our Center for Disability Services here:

<http://disabilityservices.cofc.edu/>

3.12 Academic Integrity Statement(s)

“Academic Integrity” is a fancy way of saying honesty. I prefer to assume that folks are fundamentally honest (and generally I find this to be true). And let’s face it, a dishonest person is not going to be persuaded to be honest just because of some statement on a syllabus. But I need to have a statement, so here goes:

be honest.

I know sometimes stress can make you do things you wouldn’t otherwise do, and you might tell yourself that “it’s just a little cheating”, but being honest is like being pregnant: you are or you aren’t. Your integrity is worth a lot more than any grade; don’t become someone you can’t respect for an exam or assignment you won’t even remember in a couple of years.

Any cheating, plagiarism, etc. will be reported to the Honor Board. If you are not familiar with the College of Charleston Honor Code, you can find it in the student handbook:

<http://studentaffairs.cofc.edu/honor-system/studenthandbook/index.php>

3.13 Program-Specific Elements

I’m not sure what this refers to, so until told otherwise, I’m not going to include anything here.