

Biology 490 Senior Seminar: Sexual Behavior in Animals

Fall 2022

Class information is regularly posted on *Canvas*.

Course Overview:

Course Description: How is sexual behavior across the animal kingdom shaped by physiology, the physical environment, and social context? We explore these themes through discussions, presentations, and two forms of science writing (academic and popular) that develop critical thinking and science communication skills. Topics include sexual conflict, courtship, mate choice, mate competition, sexual strategies, cryptic female choice, and sex roles and sex change.

Course Learning Objectives:

- Recognize critical thinking as a process of identifying, analyzing, evaluating, and constructing reasoning in deciding what conclusions to draw or actions to take
- Evaluate and construct arguments through critical thinking processes
- Locate, critically read, synthesize, and discuss primary literature dealing with multiple aspects of sexual behavior in animals and articulate their broader societal impacts
- Demonstrate the ability to write and orally present biological information that is articulate and grammatically correct with properly documented and organized ideas and data, appropriate to the specific audience
- Evaluate your own and others' written and oral communication skills by providing and applying useful feedback

Times and Locations:

Thursdays 11:00-12:50 p.m. in CBB 271 (unless otherwise indicated)
*Feel free to bring a lunch or snack

Instructor:

Sarah Jane Alger, Ph.D.

Office: TNR 439

Office hours: Email me for an appointment

E-mail: salger@uwsp.edu (I generally respond to emails within 24 hours. If you don't hear back from me within 24 hours, contact me again)

Books and Articles:

You will need three books for this course, all of which are available for purchase in the bookstore and at other book retailers:

- **Hofmann, Angelika. (2019). Writing in the Biological Sciences, 3rd edition. New York: Oxford University Press.**
 - This is a guide to communicating science to professional audiences. We will use this as a reference when writing and revising our academic review papers.
- **Bondar, Carin. (2010). The Nature of Human Nature. Lexington: Lulu.com (self-published).**
 - This is a collection of pop-science mini-essays on various animal behavior topics. We will incorporate these fun, 2-page stories into our discussions and use them as examples of science writing geared towards a public audience.

- **Judson, Olivia. (2003). Dr. Tatiana's Sex Advice to All Creation. London: Vintage Books.**
 - This is a collection of articles written in the form of a sex advice column to a variety of species with some very interesting sex problems. We will incorporate these fun, 3-page articles into our discussions and use them as examples of science writing geared towards a public audience.

You will also read many journal articles that are posted on Canvas or available through our library system. Articles form the basis of class discussions and your written assignments. They vary in topic, depth and length and include both primary articles and reviews. The reviews also serve as examples for the review paper you will write.

Course Structure, Requirements and Grading:

Week	Date	Topic	Readings*	Assignments*
1	Sep 8	Course overview and discuss science communication	Handouts	Assigned discussion and writing groups. Pick a paper topic
2	Sep 15	Demonstration discussion on sexual conflict	1 pop-science article and 2 journal articles	Paper thesis draft due with identification of approach
3	Sep 22	Writing Workshop 1: Research tools and techniques	<u>Writing in the Biological Sciences</u> chapters 4 and 11	Homework problems due
4	Sep 29	Writing Workshop 2: Developing an argument map and outline	Handouts	Refined paper thesis and several relevant primary, secondary and tertiary sources due
5	Oct 6	Practice discussion on courtship	2 pop-science articles and 2 journal articles	
6	Oct 13	Practice discussion on mate choice	2 pop-science articles and 2 journal articles	
7	Oct 20	Writing Workshop 3: Analyzing and refining a thesis, argument map and outline, argument presentation	Handouts	Presentation of argument due
8	Oct 27	Advanced discussion on mate competition and Pop-science Presentations	1 pop-science article and 2 journal articles	
9	Nov 3	Writing Workshop 4: Integrating and strengthening your argument	Handouts	Paper argument sections due
10	Nov 10	Advanced discussion on alternative sexual strategies and Pop-science Presentations	1 pop-science article and 2 journal articles	
11	Nov 17	Writing Workshop 5: Writing a <i>good</i> rough draft	<u>Writing in the Biological Sciences</u> chapters 2 and 3	Paper introduction and conclusion due, homework problems due

12	Nov 24	NO CLASS: THANKSGIVING		
13	Dec 1	Writing Workshop 6: The peer review process	Handouts	Paper manuscripts due
14	Dec 8	Advanced discussion on cryptic female choice and Pop-science Presentations	1 pop-science article and 2 journal articles	Peer reviews due
15	Dec 15	Advanced discussion on alternative sexual strategies and Pop-science Presentations	1 pop-science article and 2 journal articles	Final papers and responses to editor due

**Note: See the "Detailed Course Schedule and Discussion Topics" handout for details*

Academic Review Paper and Peer Review:

Students will work in groups of three to write a 15-25 page review paper on a topic of their choice within an assigned subject area. Students will then peer-review a draft by another student group and each reviewer will suggest an additional article to incorporate into the manuscript. Students will write a written response to the peer reviews and complete the final draft of their paper, incorporating *additional* sources. The main goals of this assignment are to explore a topic of your choice in depth and communicate what you have learned about that topic. You will also gain skills finding relevant resources, critical thinking, writing with coauthors, and editing.

Note: Because students peer review each other's rough drafts for a grade, **late rough drafts will not be accepted.*

Discussion Leading and Participation:

About half of the classes will take the form of discussions of papers surrounding a common topic and each topic will be covered in two discussions. Everyone is expected to read all papers and comment or pose a question on *each paper*. Discussion leaders of each topic are expected to do a brief oral presentation to introduce and make connections within their topic and to make sure each paper is fully discussed.

Although you will not be expected to master every detail of the primary research articles, everyone should be able to answer the following questions about each:

- 1) What was the hypothesis? Briefly, what was the rationale for the hypothesis?
- 2) Briefly, what were the methods? Were they appropriate to address the hypothesis?
- 3) What were the major results and how did they relate to the hypothesis?
- 4) What was the conclusion? Do you believe the conclusion? Is there an alternative interpretation of the data the authors did not address? What further evidence would you like to see?
- 5) What were the major strengths and weaknesses of the paper?
- 6) How does this paper relate to other papers we've read? How does it relate to other work?

Discussion leaders should additionally be prepared to discuss/explain the following:

- 7) Explain the rationale *in detail*. Identify the claims, evidence for those claims, and connections between the claims.
- 8) What do these animals look like? What is their natural history? How does this study fit in to their natural history?
- 9) How does each technique used in the study generally work?
- 10) How do the results of the paper tie in with the discussion topic?
- 11) How does this paper tie in with the Pop-science presentations so far? (see below)
- 12) How do the results of the paper meet societal needs (for example: basic research, stewardship of biodiversity, human health, entrepreneurial innovation, etc.)?

Note: This preparation may involve the use of outside sources and you are encouraged to prepare for discussion leading with your discussion-leading group.

Pop-Science Communication:

You will write a 500-800 word pop-science (short for "popular science") article that would be appropriate to post online for a general audience high school aged and up. For your topic, you will describe a single primary research paper that relates to your Advanced Discussion Leading topic. You will either find or make accompanying imagery for your article. You will present your article to the class as part of your Advanced Discussion Leading for feedback and your written article will be due that night.

Critical Thinking:

This course is part of a university-wide initiative to improve the teaching of critical thinking across the curriculum. Critical thinking is a process of identifying, analyzing, evaluating, and constructing reasoning in deciding what conclusions to draw or actions to take. Critical thinking abilities help us better understand our world, make better decisions, and are sought out by employers. As a capstone course, critical thinking will be at the heart of everything we do in this class.

Comprehensive Exam:

Satisfactory completion of BIOL 490 courses requires the completion of the Biology Department's comprehensive exam. Test scores are used to compare class averages among various populations of biology majors to assess general student learning. Scores will not be made available to you nor your instructor and will have *no bearing on grades*. However, *your 490 grade will be withheld until the exam is taken*. The exam will take about 60 minutes.

Point Distribution:

Discussion Participation*	12 points (5 discussions X 3 points each; drop the lowest score)
Practice Discussion Leadership	6 points
Advanced Discussion Leadership	12 points
Pop-science Paper	15 points
Writing Workshop Participation*	5 points (6 workshops X 1 point each; drop the lowest score)
Argument Presentation	5 points
Paper Argument Section Draft	5 points
Academic Paper Draft	15 points
Academic Paper Final	15 points
Peer Review	5 points
Homework	5 points

Total **100 points** (NOTE: Each point is 1% of your grade)

*You may miss up to one discussion *as a participant* (as long as you make arrangements with me prior to the missed class) and one writing workshop (as long as you make arrangements with your writing group prior to the missed class) without penalty.

Letter Grades:

	87-89.9% = B+	77-79.9% = C+	67-69.9% = D+
93-100% = A	83-86.9% = B	73-76.9% = C	60-66.9% = D
90-92.9% = A-	80-82.9% = B-	70-72.9% = C-	0-59.9% = F

Absence Policy and Accommodations:

About half of this class is based on discussions and the other half is based on writing workshops, all of which require your presence and participation. However, a single absence *from a discussion in which you are a participant* (i.e. not a Discussion Leader) will be excused for each student. If you need to miss a discussion in which you are a Discussion Leader, you must reschedule to lead a different discussion topic *prior to that discussion*. Additionally, a single absence *from a writing workshop* will be excused for each student, provided you make acceptable arrangements with your co-authors. Once your excused absence in a given category has been used up, **an absence or lack of participation in a discussion class or writing workshop will result in a deduction of all associated points.** (Exceptions can be made in extraordinary cases: If you need to be absent for illness or personal reasons, please let me know in advance and I will try to be accommodating. I will keep any requests confidential.)

In compliance with the Americans with Disabilities Act, I will make every effort to honor requests for reasonable accommodations made by individuals with disabilities. If you have a disability and require accommodations, please register with the [Disability Resource Center](#) (room 108 in the Collins Classroom Center (CCC), 715-346-3365, drc@uwsp.edu) and *let me know as soon as possible*. Requests for accommodation can be responded to most effectively if I receive the requests early in the semester. Such requests are confidential. For more information about UWSP's policies with respect to the Americans with Disabilities Act (ADA), check here: <https://www.uwsp.edu/hr/Pages/Affirmative%20Action/ADA.aspx>. You can also find more information on services provided at: <https://www.uwsp.edu/disability-resource-center/>

Health Policies in the Time of Pandemics:

COVID-19:

Many COVID-19 restrictions have been lifted, both across the state and on UW-Stevens Point campuses. Yet COVID cases continue, so it's important to continue taking precautions. Here are the COVID-19 procedures UW-Stevens Point has in place for fall.

- Face coverings are not required but are encouraged. Consider wearing a mask in crowded indoor spaces and when in close proximity outdoors.
- Please be respectful of individual choices to wear or not wear a face covering, and to those who have a higher risk of complications.
- Masks are required in Student Health Service, UWSP Counseling Center and the Speech, Language and Hearing Clinic.
- Being up-to-date on vaccines is one of the best ways to protect yourself and others from COVID-19. Vaccines are safe, effective, free and strongly encouraged at UW-Stevens Point. You can find a vaccine location at [vaccines.gov](https://www.vaccines.gov).
- Testing - Get tested if you have COVID-19 symptoms or have been exposed to the virus.
 - Students at the Stevens Point campus have easy access to Student Health Service for testing and vaccines. Call 715-346-4646.
 - A limited number of self-administered COVID tests are available for residence hall students at each hall's front desk.
 - Students who live on and off-campus as well as every household in the U.S. may order a third round of free at-home tests.
 - Testing is also available at various [community testing sites](#).
- If you get COVID-19, the Centers for Disease Prevention and Control (CDC) recommends:
 - Isolate at home, separate from others, regardless of vaccination status. Also isolate while awaiting test results.
 - Isolate for at least 5 days, or until symptoms improve.

- Wear a high-quality, well-fitting mask for 10 days.
- Learn more about when to [end isolation](#) and when to [stop wearing a mask](#).
- Notify your instructors or supervisor and your close contacts.
- If you are identified as a close contact or been exposed to COVID-19:
 - Wear a quality, well-fitting face covering for 10 days after exposure. The CDC no longer requires quarantine.
 - Monitor your symptoms.
 - Get tested 5 days after exposure. Test again in 48 hours, or if you develop symptoms in the next 10 days.
- For more information, visit [our COVID website](#). Students with questions may call Student Health Service at 715-346-4646.

Monkeypox:

Monkeypox is a rare disease caused by a virus similar to the smallpox virus. It has been confirmed in Wisconsin, but no cases have been reported in the counties where UW-Stevens Point has facilities. An unexplained rash is among the [symptoms](#). It is spread primarily through close, physical contact and is less transmissible than COVID-19. While rarely fatal, the recovery period can last several weeks. If you have symptoms, talk to your health care provider. UWSP students may call Student Health Service at 715-346-4646. For more information, including steps to prevent getting monkeypox, see visit [this UWSP site](#), the [CDC](#) or the [Wisconsin Department of Health Services \(DHS\)](#).

UWSP Community Bill of Rights and Responsibilities:

UWSP values a safe, honest, respectful and inviting learning environment. A set of expectations for students and instructors, known as the *Rights and Responsibilities* document, is intended to help establish a positive living and learning environment. For more information go to <https://www.uwsp.edu/acadaff/HLCSelfStudy/Community%20Rights%20and%20Responsibilities%202011.pdf>

Academic integrity is central to the mission of higher education in general and UWSP in particular. Academic dishonesty (cheating, plagiarism, etc.) is taken very seriously and will likely result in a failure (zero) for the assignment. For more information, see the UWSP "Student Academic Standards and Disciplinary Procedures" section of the *Rights and Responsibilities document*, Chapter 14, at the following site:

<https://www.uwsp.edu/acadaff/HLCSelfStudy/Community%20Rights%20and%20Responsibilities%202011.pdf>

Title IX:

Under several federal and state laws and according to several university guidelines, I am required to report acts of a criminal or offensive nature. This includes acts of sexual harassment and assault, bias and hate crimes, illicit drug use, and acts of violence. Any disclosure or description of these incidents – both current and in the past – may be reported to the Dean of Students office (<http://www.uwsp.edu/dos/>) or the local authorities.

Emergency Preparedness:

In the event of a medical emergency, call 911 or use the nearest red emergency phone. Offer assistance if you are trained and willing to do so. Guide emergency responders to the victim.

In the event of a tornado warning, proceed to the lowest level interior room without window exposure or any of the hallways. Avoid wide-span rooms and buildings. For floor plans showing severe weather shelters, see <http://www.uwsp.edu/rmgt/Pages/em/procedures/other/floor-plans.aspx>.

In the event of a fire alarm, evacuate the building in a calm manner. Meet in the nearest parking lot. Notify me or emergency command personnel of any missing individuals.

In the event of an active shooter, your first priority should be to run and escape. Once you are safely out of range, call 911. If you are not confident that you can get out safely, then lock doors, turn off lights, spread out, hide, and remain quiet (turn your phone ringer and vibration off). Look around for potential weapons in case you will need to fight. If an active shooter enters the room and is aware of your presence and/or the presence of others, fight with everything you've got. Follow the instructions of emergency responders when they arrive.

For details on all emergency response plans at UW-Stevens Point, please view the Emergency Management Plans at <https://www3.uwsp.edu/emergency/Pages/emergency-procedures.aspx>.