

Evolution of Sex & Gender in Animals
11:216:115 (3 credits)
Fall 2024

Mondays & Thursday 8:30 to 9:50am
Room: CDL 102

Instructor: Dr. Kimberly N. Russell (kimberly.russell@rutgers.edu)

Office: 124 ENR Building

Office Hours: by appointment <https://krussell-rutgersuniversity.youcanbook.me>

Pre-requisite: None

Core Curriculum: NS-1, CCO-2

This course will examine the biological basis of sex determination and resultant gendered behavior in all animals, including humans. We will discuss how and why sex evolved, how different organisms express (& often change) their gender, and what selection pressures shape mating systems and mate selection. In addition, we will examine how gender-specific selection influences offspring care and attachment, aggression and friendship. Throughout the course, we will evaluate which principals can and cannot be extrapolated to modern human behavior as well as how we as humans project our ideas of gender onto our study of the natural world. In addition, we will critically discuss contemporary articles concerning gender in the popular media.

Course Learning Goals:

1. **Recognize and articulate the diversity of sex determination mechanisms and gender flexibility in animals.**
2. **Recognize and discuss the evolutionary basis for sex-based behavioral differences in animals as well as when we expect or don't expect to see differences.**
3. **Analyze the evolutionary drivers behind behavioral differences in human males and females and the interplay between biology & culture.** ^[1]_{SEP}
4. **Evaluate and think critically about the validity of evolutionary arguments regarding gendered behavior.**
5. **Assess the degree to which humans project our ideas of gender onto our study of the natural world.**
6. **Critically evaluate contemporary articles in the popular media concerning topics related to gender and gender bias in humans (AKA how to spot "fake news").**

Core Curriculum Learning Goals

- **Contemporary Challenges CCO-2.** Analyze the relationship that science and technology have to a contemporary social issue
- **Natural Sciences NS-1.** Understand and apply basic principles and concepts in the physical or biological sciences

Course readings. Readings to inform lectures and discussion will come from two sources: book chapters and primary literature. Articles will be posted on Canvas for students. In addition, for those students interested in reading further on various topics, I will create folders of optional readings that students are free to download.

Required:

Cook, L. 2022. **Bitch: A revolutionary guide to sex, evolution & the female animal.** Penguin Random House.
ISBN 13 : 9781541674899 (available at the campus bookstore, Amazon and Audible!!).

Grading:

Exams 300 points (3 x 100 points each)

Pre & Post-tests 20 points (2 x 10pts)

Short written assignments 100 points (4 x 25 points each)

Class participation & engagement

- Small group activities & discussions (100 points)
- Short homework assignments (35 points)

Total course points: 555*

**note some manual adjustments might be necessary to the point totals due to schedule changes, but the relative contribution of each will stay the same.*

**note, there is a required pretest and a post-test in order to evaluate how much you have learned over the course of the semester. Neither of these will affect your grade.*

Exams I, II, III.

- Exams will be a mixture of matching, multiple choice & short-answer/short-essay questions.
- **Exam make-ups are only allowable with a note from the Dean of Student's Office or a Doctor and arrangements must be made in advance. In case of emergency, please notify the instructor as soon as possible.**

Short papers

- Four times over the course of the semester, students will be required to submit a 1 to 2 page (single spaced) paper discussing an article found in the popular media that addresses a class-related topic. What is the "popular media"? General news websites like CNN.com, Yahoo.com, Salon.com, Slate.com, bbc.com, npr.com, etc. Newspapers or magazines like the New York Times or the New Yorker. Note these MUST be general news sites/magazines (NOT science-only). You are expected to browse the news regularly during the semester to find new articles that concern sex and gender. You may be asked to discuss these articles with your discussion group. Details will be in a separate prompt/rubric.

Late assignments will be deducted 10% per day, no questions asked. Students are responsible for making sure their assignment upload to Canvas correctly. Uploading mishaps or corrupted files will not be exempt from late penalties. To ask for an extension due to health reasons, please contact Dr. Russell via e-mail.

Instructor Accessibility. I will do my best to promptly (within 24 hours during the week) respond to e-mails sent to Kimberly.russell@rutgers.edu; please do NOT use the Canvas e-mail system. I will also be available to schedule private zoom meetings with students by appointment (<https://krussell-rutgersuniversity.youcanbook.me>). My office is 124 ENR and my private Zoom link is:

<https://rutgers.zoom.us/my/kimrusse?pwd=N3pNQ2YwSngx0tBaHB6VXU0N1lCdZ09>

ABSENCE POLICY

Students are expected to attend all classes. If you have to miss class due to illness, please use the University absence reporting system website (<https://sims.rutgers.edu/ssra/>) to indicate the date and reason for your absence. An e-mail is automatically sent to me. In-class work **cannot** be made up in most cases. All students can miss one assignment and/or two lecture days without penalty (in-class assignments will occur sporadically). Please consult with your fellow students, the syllabus and review the lecture slides to find out what was missed. DO NOT send me an e-mail or come up to me after class to say "did I miss anything important?" – I will not answer. Participation is an important

component of this course and regardless of how well you score on exams, your grade will be negatively affected if you do not come to class regularly.

****students who miss more than 50% of classes (excluding exam dates) will automatically fail the course (or in the case of verified medical excuses, receive an Incomplete).***

Academic Integrity. All students are expected to follow University policies on academic integrity:

<http://academicintegrity.rutgers.edu/>

Academic Honor Code

Each student has the responsibility (1) to uphold the highest standards of academic integrity in the student's own work, (2) to refuse to tolerate violations of academic integrity in the university community, and (3) to foster a high sense of integrity and social responsibility on the part of the university community.

Cheating and Plagiarism: Plagiarism is defined as the use of any information, published, or unpublished without acknowledgement. Cheating occurs when you use the work of another student in place of your own. Neither will be tolerated. It is extremely important that you distinguish your own ideas from those of others. You must always acknowledge sources. But even if you acknowledge a source, YOU still CANNOT copy and paste or simply change a few words. You MUST put everything in your own words. You may not use AI in any form to help with assignments. If you have any questions, see the instructor.

Disability Services. Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation. If the documentation supports your request for reasonable accommodations, your campus's disability services office will contact your Instructors for you. To begin this process, please complete the Registration form on the ODS web site at:

<https://ods.rutgers.edu/students/getting-registered>

****note that accommodations must be invoked by students and will not be applied automatically. I.e., if you are allowed to have 'flexible deadlines', then you simply need to let me know in advance via e-mail that you need extra time for an assignment. It will be granted without penalty if you ask. Same if you are allowed extra time on exams; you need to let me know in advance so we can make arrangements.***

Statement of Diversity and Inclusion

It is our intention that students of all backgrounds will be well served by this course. We will work to create an environment of **inclusion** which respects and affirms the inherent dignity, value, and uniqueness of all individuals, communities and perspectives. We are lucky to have a diverse university. Diverse voices and life experiences enhance the learning process and we welcome students to share their personal experiences. We will not tolerate disrespectful language or behavior against any individual or group. If you feel as though you have been disrespected or treated unfairly by the instructors or any other individual please let us know. You may speak with the instructors in person, over email or report anonymously using the feedback note box. You may also report bias to the Rutgers Diversity and Inclusion initiative using this link:

<http://inclusion.rutgers.edu/report-bias-incident/>.

***Tentative Schedule & Assignments/Exams**

PLEASE complete the reading assignments BEFORE coming to class unless otherwise noted.

****This schedule may be updated/changed regularly. Listen for announcement in-class.***

Meeting date		LECTURE TOPIC	Readings & Assignments
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9/5	Week 1	Introduction: Overview & Activities	
9/9 9/12	Week 2	Asynchronous (TBA): No in-person meeting Historical & Persistent Biases in the Study of Sex & Gender	Text: Introduction Pre-test due 9/13
9/16 9/19	Week 3	Bias in Science Primer on Evolution	
9/23 9/26	Week 4	Primer on the Study of Animal Behavior (essay practice) Science Literacy: Evolution & Behavior	Essay 1 due 9/26
9/30 10/3	Week 5	Exam Review Exam 1 (in person)	
10/7 10/10	Week 6	How to Identify Bias in Research & Reporting Anarchy of Sex No Class	Chapter 1
10/14 10/17	Week 7	Evolution of Sex, Sexual Development & Fluidity	Chapter 11
10/21 10/24	Week 8	Sexual Selection & The Mysteries of Mate Choice	Chapter 2 & 3; Essay 2 due 10/21
10/28 10/31	Week 9	Mating Systems & The Monogamy Myth Fifty Ways to Eat your Lover: the conundrum of sexual cannibalism	Chapter 4
11/4 11/7	Week 10	Love is a battlefield: Genital Warfare Exam 2 (in person)	Chapter 5
11/11 11/14	Week 11	Parental Care I: Maternal vs. Paternal Care Parental Care II: Social Care	Chapter 6 Essay #3 due 11/14
11/18 11/21	Week 12	Social Care in Humans Competitive Mothering in Animals	HrdyM&OCh1 Chapter 7
11/25 11/26	Week 13	Aggression & Hierarchies & Primate Politics Gender Roles & Expectations	Chapter 8
12/2 12/5	Week 14	Gender Roles in Humans Matriarchs & Menopause	Chapter 9
12/9		Wild Card: Student Choice	Essay #4 due 12/12
12/16	Finals week	Exam 3 (8 to 11am; in person)	

STUDENT WELLNESS SERVICES

Counseling, ADAP & Psychiatric Services (CAPS)

(848) 932-7884 / 17 Senior Street, New Brunswick, NJ 08901/ www.rhscaps.rutgers.edu/

CAPS is a University mental health support service that includes counseling, alcohol and other drug assistance, and psychiatric services staffed by a team of professional within Rutgers Health services to support students' efforts to succeed at Rutgers University. CAPS offers a variety of services that include individual therapy, group therapy and workshops, crisis intervention, referral to specialists in the community and consultation and collaboration with campus partners.

Violence Prevention & Victim Assistance (VPVA)

(848) 932-1181 / 3 Bartlett Street, New Brunswick, NJ 08901 / www.vpva.rutgers.edu/

The Office for Violence Prevention and Victim Assistance provides confidential crisis intervention, counseling and advocacy for victims of sexual and relationship violence and stalking to students, staff and faculty. To reach staff during office hours when the university is open or to reach an advocate after hours, call 848-932-1181.

Dean of Students Office

848-932-2300 / 88 College Avenue, New Brunswick, NJ 08901 / <https://deanofstudents.rutgers.edu/>

Mon-Fri, 8:30am-5:00pm

The Dean of Students Office at Rutgers University-New Brunswick provides solutions, services, and support to help students navigate Rutgers University. The Office serves as a student support network by providing advocacy, problem resolution, and critical incident intervention for those times when additional assistance is needed. Please call to schedule an appointment to meet with a representative from the Dean's office.

DoSomething button through Rutgers Dean of Students office:

<http://health.rutgers.edu/do-something-to-help/>

Wellness Coaching through Rutgers HOPE:

<http://health.rutgers.edu/education/hope/wellness-coaching/>

Self-Help Apps found on the Rutgers Student Health website:

<http://health.rutgers.edu/education/self-help/self-help-apps/>

NJ Hopeline - (1-855-654-6735) | **National Suicide Hotline** - (1-800-273-8255)