

Evolution of Sex – Spring 2025
490R Section 001
Utah Valley University

Welcome to BIOL 490R Section 001 – Evolution of Sex. What is sex, and why does it matter? In this discussion-based course, we will explore the complexities and controversies surrounding the evolution of sex.

Instructor Contact Information

Name: Dr. Jessica A. Cusick (she/her)

Office Location: SB 242x

Contact:

email at jcusick@uvu.edu or
via Canvas Inbox

Phone: 801-863-8622

Virtual Student Question Hour:

Wednesdays 11:00am-12:00pm or by
appointment on Teams
(Link for Office Hours in Canvas under
“Meet Your Instructor”)

Name: Dr. Carl E. Hjelman (he/him)

Office Location: SB 242b

Contact:

email at Carl.Hjelman@uvu.edu or
via Canvas Inbox

Phone: 801-863-8084

Office Hours:

Wednesdays 2-3pm, Thursday 11:30-
12:30pm or by appointment

Course Information:

Course: BIOL 490R Section 001

Day/Time: Wednesday 1:00-1:50pm

Pre-requisites: BIOL 3500 (Genetics) and University Advanced Standing

Location: SB 268

Book: No required textbook, all materials available online or on Canvas.

Syllabus and Schedule Change Policy

You are required to read this syllabus in its entirety. This syllabus is your contract for BIOL 490R. This syllabus is a guide for the course and all items in this syllabus are subject to change or modification with advance notice. You are responsible for messages sent by the instructors and other UVU officials to your UVU email address and messages posted to Canvas. **If you do not regularly use this address, please forward your UVU email to the address you regularly use.** Please check the email for important class announcements and updates.

A separate schedule of topics to be covered each day is provided on Canvas. This schedule is subject to change as determined by the needs of the class. All readings/assignments are subject to change with advanced notice.

Class Culture:

As your instructor, it is my intent to create a welcoming, fair, and safe learning atmosphere that is representative of a diversity of perspectives, and where all students are encouraged to share, express, and contribute in a safe environment. Your experience in this class is important to us and we want you to feel included, respected and that your voice is heard. You are expected to respect the instructor and your peers at all times in this course. Please feel free to contact us if you would like to talk about any suggestions and/or concerns. If that feels uncomfortable to you, you can also contact the [Office of Institutional Engagement and Effectiveness](#) to ask for help and support.

COURSE CONTENT & STRUCTURE

Course Description:

What is sex, and why does it matter? In this discussion-based course, we will explore the complexities and controversies surrounding the evolution of sex. From the origins of genetic sex determination and sex chromosomes to the drama of sexual selection and reproductive behavior, we'll take a deep dive into the biological, ecological, and genetic factors that shape sex across the tree of life.

As an evolutionary geneticist and an evolutionary behavioral ecologist, your instructors bring varying perspectives to unravel questions such as: Why do some species have two sexes while others defy the binary? How do cooperation and conflict shape reproductive strategies? And why do scientists study sex amidst its inherent ambiguity and diversity?

This course will challenge students to critically engage with the latest research, discuss emerging questions, and reflect on the broader implications of sex in biology. Through activities and assignments, students will gain skills in scientific literacy and communication and hopefully will leave the course with a new appreciation for the complexity of sex.

Overview of Course Format and Preparation:

This course will be taught face to face. In addition, we will use Canvas and Microsoft Teams class discussions, assignment submissions, and other forms of engagement. Please review schedule and specific instructions for the class period and assignments for more details.

This course has been designed and structured to enable the learning of biological concepts largely through both lectures and active-learning practices (e.g., in-class group-work and in-class discussion). Journal discussions will initially be led by the instructor and then will be student-led for the remaining of the semester. Students will work together in small groups to lead journal discussions throughout the semester.

Given that this class is highly interactive and student driven, it is essential to come to class having done the assigned readings in order to be prepared to participate in lecture, the in-class activities, and journal discussions.

Course Objectives and Outcomes: At the end of the semester, students should be able to

1. Discuss literature and historical figures on the topic of evolution of sex
2. Explain the genetic basis for sex determination and how mechanisms of evolution can lead to the diversity of sex systems and behaviors
3. Describe the role of behavior in sexual biology (e.g., mating displays, reproduction), including similarities and differences in behavior between and among sexes.
4. Through the reading of scientific papers, evaluate and interpret scientific data to reach conclusions and to use as evidence when discussing the field.
5. Discuss, write about, and present on various topics in evolutionary biology as it relates to the evolution of sex, sex determination, and behaviors in sexual biology.

Materials, Fees, Technology Tools:

Textbook: No textbooks are required.

Assigned readings: Scientific papers, popular science articles, news articles, etc.) and videos that you will read/watch throughout the semester. These will be posted to Canvas in advance

Access to a computer and reliable internet connection: Classes will be held in person. Assignments and other course-related activities will take place on Canvas. Therefore, having a computer and internet is critical. Access to all course materials will be through Canvas. You can access the site from any computer linked to the internet. Access to this site will be critical as assignments, grades, updates, and other announcements will be posted there. The Fulton Library may loan out laptops free of charge and CARES funds are available to help students pay for internet service during the COVID-19 pandemic. Please contact us so we can give you the most up-to-date information on accessing these resources.

Word Processing Program

A word processing program that saves in .doc, .docx or .pdf format. Office 365 is [available for download](#) for all currently enrolled students.

Course Structure and Assessment Descriptions:

Lecture & Lecture Notes:

Lectures will be held face to face. In order to prepare, pre-recorded lectures or assigned readings will be posted to Canvas. Students are expected to attend class prepared to actively participate! Your active participation is important for learning and critical for the success of this class!

Some lectures may have a pre-recorded video or assigned paper to read for preparation. If so, students will write a brief summary of the recording and/or paper in preparation for class.

Literature Discussions:

Discussion classes will consist of group discussion of a paper from the primary scientific literature. The specific papers will be selected by the instructor. The instructor will lead journal discussions at the start of the semester. Student groups will be assigned a journal discussion to lead throughout the remainder of the semester. See instructions below and instructions on Canvas for how to lead a journal discussion. Students will select their discussion topic on the first day of class.

Leading Journal Discussions

In small groups, students will lead ONE Journal Discussions throughout the semester.

- **How to Prepare:** Students will be responsible for preparing for the discussion in advance by completing a summary for the assigned paper and developing discussion questions. The questions are meant to help facilitate discussion if/when needed. Leaders will also be responsible for reviewing their classmates discussion posts to determine points of discussion based on student questions.
- **Day-Of:** Group will be responsible for facilitating a thoughtful discussion with classmates.

Details on the specific readings and the requirements of the assignments will be available on Canvas.

Participating in Journal Discussions and Discussion Boards

Students will be responsible for reading the assigned paper ahead of time and participating in the Journal Discussion.

- Discussion Board Preparation: Each Journal Discussion will have a discussion board prompt. Students will be expected to post responses to the discussion board before class time. Comments that do not add significantly to a discussion will receive no credit. It is okay to disagree in a discussion. In fact, much learning happens when we disagree. **However, we need to be respectful and keep our online classroom a safe place to learn.**
- In-Class Participation: Students will be expected to come with questions and thoughts about the paper and actively participate in the paper discussion.

Final Assignment:

Arguably, one of our most important roles as scientists is to communicate complex information to the public. In this vein, students will write a short reflective summary on some aspect of the evolution of sex. This reflection must be formatted as if it were to be featured on a scientific blog, preferably one sponsored by a scientific journal, society, or publishing company (ex: <https://www.science.org/blogs> , <https://www.scientificamerican.com/> , <https://genestogenomes.org/> , <https://carlzimmer.com/category/blog/>). Blog posts must explain a complex topic succinctly and in a manner the general public can understand, being careful not to spread any misinformation. To help you, a detailed assignment summary will be posted on Canvas in advance of the deadline.

Final Assignment Due: Monday April 28, 2025 by 11:59pm

Attendance and Participation Policy:

You are expected to prepare for and attend class and participate in all activities. This class is student-driven and relies on the preparation and participation of all members. Further, absence from class makes it extremely difficult to be a successful student. **However, if you are sick, please DO NOT come to class.** Please email the instructors in advance and we can either make arrangements for you to attend virtually via Teams (if you feel well enough to do so) or ensure that you make the up work in other ways when you are better. We do not want to risk getting our classmates sick.

Course Assessment:

Your final grade will be determined by the following formula:

<u>Assignment</u>	<u>Points</u>
Lecture Preparation (10 points each x 6 classes)	60
Leading Scientific Paper Discussion (50 points each x 1 class)	50
Prepping for Scientific Paper Discussion (20 points each x 7 classes)*	140
Discussion Attendance – will not receive credit for preparation if missed discussion class	
Final Assignment	25
Total	<hr/> 275

Grading scale:

We will follow this standard grading scale:

A	94 - 100%	A-	90 - 93%		
B+	87 - 89%	B	83 - 86%	B-	80 - 82%
C+	77 - 79%	C	73 - 76%	C-	70 - 72%
D+	67 - 69%	D	63 - 66%	D-	60 – 62.
					E <60

Standard rounding rules will be followed for grade determination

Late Work Policies:

If you are dealing with ongoing health or personal circumstances that are making it difficult for you to attend class, turn work in on time, or complete assignments, please reach out so we can make a plan and minimize any impact this could have on your success at UVU. We know

everyone is trying their best and we are here to help! Please do not wait until the end of the semester to reach out, as there is very little that can be accommodated at that time.

* If you are struggling with any content covered during a class you missed - or were present for - please notify us as soon as possible so that we can work together to accommodate you.

Late Work Statement:

Late work will not be accepted unless previous arrangements have been made with the instructors. Late work is defined as any assignment submitted to the instructor after the deadline stated in the assignment or on Canvas. **If you know something has come up that may mean you will submit late work, please reach out to us and make arrangements in advance.**

Attendance Policies and Missed In-Class Work

We do not formally take attendance, however that does not mean that we do not expect you to be in class to take charge of your own learning. If attendance is lacking, we have the authority to change this policy.

If you are sick, please DO NOT come to class. Please email in advance and we can either make arrangements for you to attend virtually via Teams (if you feel well enough to do so) or ensure that you make the up work in other ways when you are better. We do not want to risk getting our classmates sick.

Student Accessibility and Accommodation:

Students needing accommodations due to a permanent or temporary disability, pregnancy or pregnancy-related conditions may contact UVU [Accessibility Services](#) at accessibilityservices@uvu.edu or 801-863-8747.

Accessibility Services is located on the Orem Campus in BA 110.

Deaf/Hard of Hearing students requesting ASL interpreters or transcribers can contact Accessibility Services to set up accommodations. Deaf/Hard of Hearing services can be contacted at DHHservices@uvu.edu

DHH is located on the Orem Campus in BA 112.

Academic Honor - Cheating and Plagiarism Policy:

In all instances, policies identified in the UVU Catalog regarding academic ethics and honesty are to be followed. We do not tolerate cheating (parasitism) of any kind, including copying from another student on exams or assignments. Students are also not permitted to use any AI to generate responses for anything related to this course. Students are expected to display academic integrity at all times and in all circumstances. We will impose one of several penalties for cheating that range from a warning up to assigning a failing grade for the course to reporting misconduct.

Academic Integrity, Cheating and plagiarism are defined below.

Academic Integrity: Academic integrity is a basic principle which requires that students take credit only for ideas and efforts that are their own. Cheating, plagiarism, fabrication, and other forms of academic dishonesty are often defined as the submission

of materials in assignments, exams, or other academic work that is based on sources that are prohibited by the faculty member or in ways that do not properly cite the source of a student's ideas and content. Further information on what constitutes academic dishonesty is detailed in UVU Policy 541: Student Code of Conduct.

Cheating is the act of using, attempting to use, or providing others with unauthorized information, materials or study aids in academic work. Cheating includes, but is not limited to, passing examination answers to or taking examinations for someone else, or preparing or copying other's academic work.

Plagiarism is the act of appropriating any other person's or group's ideas or work (written, computerized, artistic, etc.) or portions thereof and presenting them as the product of one's own work in any academic exercise or study.

Fabrication: the use of invented information or the falsification of research or other findings.

AI: Any form of artificial intelligence or other websites that are designed to produce/summarize written work is not permitted in this class. Students are expected to write all responses in their own words without the assistance of artificial intelligence or other related programs.

Please ask us if you are not sure about what constitutes plagiarism. Lack of knowledge or intent is not an excuse for plagiarism.

**For 3 points of extra credit on the first assignment, and to show you have read the syllabus, email Dr. Cusick and tell me (1) which class are in (you're in BIOL 490R Section 001) and (2) one topic you are most excited to learn about in this class and why!*

Title IX and Sexual Misconduct

Utah Valley University does not discriminate on the basis of race, color, religion, national origin, sex, sexual orientation, gender identity, gender expression, age (40 and over), disability, veteran status, pregnancy, childbirth, or pregnancy-related conditions, citizenship, genetic information, or other basis protected by applicable law, including Title IX and 34 C.F.R. Part 106, in employment, treatment, admission, access to educational programs and activities, or other University benefits or services. Inquiries about nondiscrimination at UVU may be directed to the U.S. Department of Education's Office for Civil Rights or UVU's Title IX Coordinator at 801-863-7999 – TitleIX@uvu.edu – 800 W University Pkwy, Orem, 84058, Suite BA 203.

UVU is committed to fostering a safe, productive learning environment. Title IX makes it clear that violence and harassment based on sex and gender (which includes sexual orientation and gender identity/expression) is a civil rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, color, religion, age, status as a person with a disability, veteran's status or genetic information. If you or someone you know has

experienced or experiences harassment or sexual assault including, dating and domestic violence, stalking or sexual exploitation, you are encouraged to report it to the Title IX Coordinator in the Office for Equal Opportunity and Affirmative Action, BA-203, (801) 863-7999.

Our school encourages anyone experiencing sexual misconduct to talk to someone about what happened, so they can get the support they need and our school can respond appropriately.

If you wish to speak confidentially about an incident of sexual misconduct, want more information about filing a report, or have questions about school policies and procedures, please contact our Title IX Coordinator, which can be found on our school's website.

Our school is legally obligated to investigate reports of sexual misconduct, and therefore it cannot guarantee the confidentiality of a report, but it will consider a request for confidentiality and respect it to the extent possible. **As a teacher, we are considered a “Responsible Employee” and am also required by our school to report incidents of sexual misconduct and thus cannot guarantee confidentiality.** We must provide our Title IX coordinator with relevant details such as the names of those involved in the incident. **Please know that you can seek confidential resources** at UVU Student Health Services, SC-221, (801) 863-8876.

For more Information: [Title IX Statement](#) and <https://www.uvu.edu/equalopportunity/>

Religious Accommodations

UVU values and acknowledges the array of worldviews, faiths, and religions represented in our student body, and as such provides supportive accommodations for students. Religious belief or conscience broadly includes religious, non-religious, theistic, or non-theistic moral or ethical beliefs as well as participation in religious holidays, observances, or activities. Accommodations may include scheduling or due-date modifications or make-up assignments for missed class work.

To seek a religious accommodation, a student must provide written notice to the instructor and the Director of Accessibility Services at accessibilityservices@uvu.edu. If the accommodation relates to a scheduling conflict, the notice should include the date, time, and brief description of the difficulty posed by the conflict. Such requests should be made as soon as the student is aware of the prospective scheduling conflict.

While religious expression is welcome throughout campus, UVU also has a specially dedicated space for meditation, prayer, reflection, or other forms of religious expression.

Links to UVU Policies and Resources (see Useful Links Document on Canvas)

[Policies and Success Strategies](#)

[Academic Tutoring](#)

[Campus Resources](#)

[Student Code of Conduct](#)

Technology Support Services

For 24/7 technical support contact [Instructure's Canvas Support Live Chat](#) phone:(385) 204-4930 (Available 24/7)