Syllabus Spring 2023



**THE UNIVERSITY OF TEXAS AT ARLINGTON**

**Course Title: BIOL/PSYC 4327-001 Behavioral Genetics**

**Instructor:**

Dr. Scott Coleman

**Email:**

Send electronic mail via Canvas

**Office:**

Room 415 Life Sciences Bldg., UT Arlington, Box 19528, Arlington, TX 76019

**Office Phone:**

Department (817) 272-2281; Office (817) 272-0345

**Office hours:**

MW 10 – 11:00 a.m. via Teams, in-person or by appointment

**Time and Place of Class Meetings:**

TTH 9:30 a.m. – 10:50 a.m. Life Science, Room 100. Lectures will be recorded via Echo 360 and posted on Canvas for student’s convenience.

**Required Texts and Course Materials:**

Knopik, V. S., Heiderhiser, J. M., DeFries, J. C., & Plomin, R., (2017). Behavioral Genetics, 7th ed. New York: Worth Publishers. ISBN-10: 1-4641-7605-1; ISBN-13: 978-1-4641-7605-0

**Course Description:**

Genetic influences on behavioral phenotypes. Research strategies, quantitative methods, and pharmacogenetic approaches to the brain; sociality and altruism; the personality, emotionality and intelligence; psychopathology; chromosomal abnormalities; forensic implications of genetic counseling.

\*Credit will be granted only once for either PSYC4327 or BIOL4327. Students seeking credit toward the science requirement must enroll in BIOL 4327.

**Requirements:**

Prerequisite: 12 hours of psychology, biology, or in combination.

**Student Learning Outcomes:**

Upon completion of this course students will:

(1) know the history of behavioral genetics research and understand basic behavioral genetics/ genomics principles.

(2) be able to explain various animal models in genetics, the associated analytical approach, and how it is used in behavioral genetics research.

(3) estimate the influences of heredity and environment on behavioral phenotypes.

(4) understand concepts of gene-environment interactions and epi-genetic influence.

(5) recognize and describe methods of scientific investigation using epidemiological approaches such as family and twin studies and genomic sequencing in association with behavioral phenotypes such as genome-wide association (GWAS).

(6) relate knowledge of behavioral genetics to areas of "mainstream" psychology including cognitive ability, development, and personality.

(7) relate knowledge of behavioral to neurological disorders, psychopathology, cognitive disabilities, and developmental disorders.

**Attendance:**

Although class attendance will not be taken, it is important to attend class since much of the material on the examinations will come from the lectures and enhances the opportunity to learn directly from the instructor. Our experience has been that those students who attend class make the best grades.

**Extra-Credit:**

Students may earn extra-credit points by engaging in class discussions via Canvas Discussions. There will be a total of five discussion topics worth 10 points each for a maximum of 50 points. The discussion topics will be paired with an exam domain. Student’s discussions will be evaluated for their content and completeness. Please see Canvas for requirements, guidelines, and grading rubric.

**Grade Calculation:**

Your course grade will be based on five exams scores and extra-credit. Each exam will be comprised of 50 "objective answer" questions that may or may not include Multiple Choice, True/False, and Matching questions. The exams are worth 100 points each for a total 500 points. The exams are weighted equally so your scores will be averaged to obtain a letter grade, where, A>90%, B>80%, C>70%, D>60%, F<60%. Please note: Exams will not be "curved". Course grade is obtained by summing exam points with extra-credit points. For example, a student scores a total of 420 points on 5 exams and receives an additional 30 points of extra-credit would receive an " A". The cutoffs for A = 450, B = 400, C = 350, D = 300; and F< 300. Please note that grade average and letter grade given on “Canvas Grade” may not reflect the actual course grade based on the above grading procedure.

**Make-Up Exams:**

A single “make-up” exam session for missed exams will be held on **Thursday May 4th, 2023**. Students that fail to taking a make-up exam at the allotted time and date must provide an official excuse with verifiable documentation. Please note: A “make-exam” is **not** a “do-over” exam for poor performance on a previously taken exam.

**Technology Requirements:**

Students will use a variety of online tools in this course including Canvas, Teams, Respondus Lockdown and Monitor. Students can access tutorials on these tools by clicking on the “Get Started” Box on their Canvas Homepage. Students must have access to reliable internet, computer with UTA compatible internet. This course requires the use of LockDown Browser and a webcam for online exams. The webcam can be the type that's built into your computer or one that plugs in with a USB cable. Note for exam purposes wireless internet is not recommended. See link for additional information <https://web.respondus.com/lockdownbrowser-student-video/>

**Grade Grievance:**

Any appeal of a grade in this course must follow the procedures and deadlines for grade-related grievances as published in the current University Catalog. The instructor reserves the right to re-grade any assignment or exam in its entirety when a grade is disputed. For more information on UTA grading policy or grade grievance use the following links: <https://catalog.uta.edu/academicregulations/grades/#undergraduatetext>

or <https://www.uta.edu/student-affairs/dos/file-a-complaint>

## Institution Information

UTA students are encouraged to review the below institutional policies and informational sections and reach out to the specific office with any questions. To view this institutional information, please visit the [Institutional Information](https://resources.uta.edu/provost/course-related-info/institutional-policies.php) page (https://resources.uta.edu/provost/course-related-info/institutional-policies.php) which includes the following policies among others:

* Drop Policy
* Disability Accommodations
* Title IX Policy
* Academic Integrity
* Student Feedback Survey
* Final Exam Schedule

**Disability Accommodations:**

UTArlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including *The Americans with Disabilities Act (ADA), The Americans with Disabilities Amendments Act (ADAAA),* and *Section 504 of the Rehabilitation Act.* All instructors at UT Arlington are required by law to provide “reasonable accommodations” to students with disabilities, so as not to discriminate on the basis of disability. Students are responsible for providing the instructor with official notification in the form of **a letter certified** by the Office for Students with Disabilities (OSD).Only those students who have officially documented a need for an accommodation will have their request honored. Students experiencing a range of conditions (Physical, Learning, Chronic Health, Mental Health, and Sensory) that may cause diminished academic performance or other barriers to learning may seek services and/or accommodations by contacting: **The Office for Students with Disabilities, (OSD)** <http://www.uta.edu/disability/> or calling 817-272-3364. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at [www.uta.edu/disability](http://www.uta.edu/disability).

**Student Support Services Available:**

UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals to resources for any reason, students may contact the Maverick Resource Hotline by calling 817-272-6107 sending a message to [resources@uta.edu](mailto:resources@uta.edu), or visiting [www.uta.edu/resources](http://www.uta.edu/resources).

**Counseling and Psychological Services (CAPS):**

[www.uta.edu/caps/](http://www.uta.edu/caps/) or calling 817-272-3671 is also available to all students to help increase their understanding of personal issues, address mental and behavioral health problems and make positive changes in their lives.

**Non-Discrimination Policy:**

The University of Texas at Arlington does not discriminate on the basis of race, color, national origin, religion, age, gender, sexual orientation, disabilities, genetic information, and/or veteran status in its educational programs or activities it operates. For more information, visit [uta.edu/eos](http://www.uta.edu/hr/eos/index.php).

**Title IX Policy:**

The University of Texas at Arlington (“University”) is committed to maintaining a learning and working environment that is free from discrimination based on sex in accordance with Title IX of the Higher Education Amendments of 1972 (Title IX), which prohibits discrimination on the basis of sex in educational programs or activities; Title VII of the Civil Rights Act of 1964 (Title VII), which prohibits sex discrimination in employment; and the Campus Sexual Violence Elimination Act (SaVE Act). Sexual misconduct is a form of sex discrimination and will not be tolerated.*For information regarding Title IX, visit* [www.uta.edu/titleIX](http://www.uta.edu/titleIX) or contact Ms. Michelle Willbanks, Title IX Coordinator at (817) 272-4585 or [titleix@uta.edu](mailto:titleix@uta.edu)

**Academic Integrity:**

It is the philosophy of The University of Texas at Arlington that academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated in any form. All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures. Discipline may include suspension or expulsion from the University. According to the UT System Regents’ Rule 50101, §2.2, "Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts.

**UT Arlington Honor Code:**

*I pledge, on my honor, to uphold UT Arlington’s tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.*

*I promise that I will only submit work that I personally create or contribute to group collaborations, and reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.*

**Drop Policy:**

Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. For the Spring 2023 semester, the last day for undergraduates to drop a course is **March 31st**. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. **Students will not be automatically dropped for non-attendance**. Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. Contact the Financial Aid Office for more information. (<http://wweb.uta.edu/ses/fao>).

**Electronic Communication Policy:**

The University of Texas at Arlington has adopted the University “MavMail” address as the sole official means of communication with students. MavMail is used to remind students of important deadlines, advertise events and activities, and permit the University to conduct official transactions exclusively by electronic means. For example, important information concerning registration, financial aid, payment of bills, and graduation are now sent to students through the MavMail system. All students are assigned a MavMail account. ***Students are responsible for checking their MavMail regularly.*** Information about activating and using MavMail is available at <http://www.uta.edu/oit/email/>. There is no additional charge to students for using this account, and it remains active even after they graduate from UT Arlington. To obtain your NetID or for logon assistance, visit <https://webapps.uta.edu/oit/selfservice/>. If you are unable to resolve your issue from the Self-Service website, contact the Helpdesk at [helpdesk@uta.edu](mailto:helpdesk@uta.edu). Important emails regarding class information will be sent to students through Blackboard. It is your responsibility to regularly check Blackboard for such emails, or set up Blackboard to forward emails to an email account that you regularly use.

**Student Feedback Survey:**

At the end of each term, students enrolled in classes categorized as lecture, seminar, or laboratory will be asked to complete an online Student Feedback Survey (SFS) about the course and how it was taught. Instructions on how to access the SFS system will be sent directly to students through MavMail approximately 10 days before the end of the term. Access to SFS is also possible via Canvas. UT Arlington’s effort to solicit, gather, tabulate, and publish student feedback data is required by state law; student participation in the SFS program is voluntary.

**Emergency Exit Procedures:**

Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit, which is located on the North side of the Life Science Bldg.. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist individuals with disabilities.

**Campus Carry:**

Effective August 1, 2016, the Campus Carry law (Senate Bill 11) allows those licensed individuals to carry a concealed handgun in buildings on public university campuses, except in locations the University establishes as prohibited. Under the new law, openly carrying handguns is not allowed on college campuses. For more information, visit <http://www.uta.edu/news/info/campus-carry/>

**Active Shooter:**

The safety and security of our campus is the responsibility of everyone in our community. Each of us has an obligation to be prepared to appropriately respond to threats to our campus, such as an active aggressor. Please review the information provided by UTA Police regarding the options and strategies we can all use to stay safe during difficult situations. <https://police.uta.edu/activeshooter>

**Course Outline**

(Note: *As the instructor for this course, I reserve the right to adjust this schedule in any way that serves the educational needs of the students enrolled in this course. – Dr. Coleman*)

**Jan./17- 31. Learning Objective 1:** Intro and History of Behavioral Genetics (5 lectures)

Tentative video: “To be announced”

Reading assignments: chapters 1, 2, and 3.

**Thursday Feb./2 - FIRST EXAM: Class material and reading assignments.**

**Feb./7-21. Learning Objectives 2 and 3:** Mechanisms of Genetics and Animal Models (5 lectures).

Tentative video: “To be announced”

Reading assignments: chapters 4, 5, and 6.

**Thursday Feb./23 - SECOND EXAM: Class material and reading assignments.**

**Feb.28/ - Mar./21. Learning Objectives 4 and 5:** Heritability, Gene/Environment Interaction (5 lectures).

Tentative video: “To be announced”

Reading assignments: chapters 7, 8, and 10.

**Thursday Mar./23 - THIRD EXAM: Class material and reading assignments.**

**Mar./28-Apr./11. Learning Objectives 6 and 7:** Cognitive Abilities and Personality (5 lectures).

Tentative video: “To be announced”

Reading assignments: chapters 11 and 16.

**Thursday Apr./13 - FOURTH EXAM: Class material and reading assignments.**

**Apr./18-May/2. Learning Objectives 6 and 7:** Cognitive Disablities and Psychopathologies (5 lectures).

Tentative video: “To be announced”

Reading assignments: chapters 12, 13, and 15.

**To Be Announced – Final exam: Class material and reading assignments.**