

**Summer A 2025 AGR 3303: Genetics
Honors Syllabus**

Instructor: Dr. Kara Riggs

Office: McCarty Hall B, Room 2089

Phone: 352-273-2215

Email: kcasy@ufl.edu

Office Hours*: Wednesdays from 9:30-11:30am and by appointment via Zoom (email kcasy@ufl.edu for meeting requests)

Teaching Assistant (TA) Office Hours*:

Group	Instructor/Teaching Assistant	Email Address	Office Hours*
	Dr. Kara Riggs	kcasy@ufl.edu	9:30-11:30am on Wednesdays
1	Sadia Rafa	sadia.rafa@ufl.edu	5:30-7:30pm on Mondays
	JP Hayworth	jhayworth1@ufl.edu	5:30-7:30pm on Mondays
2	Lopamudra Saha	lsaha@ufl.edu	1-3pm on Tuesdays
	Sydney Holderman	sydneyholderman@ufl.edu	1-3pm on Tuesdays
3	Aakanksha Bandrupalli	abandarupalli@ufl.edu	11-1pm on Thursdays
	Alicia Gleacher	alicia.gleacher@ufl.edu	11-1pm on Thursdays
4 (Honors and REC)	Aruna Thomas	aruna.thomas@ufl.edu	3-5pm on Fridays
	Julie Van	julie.van@ufl.edu	3-5pm on Fridays
	Brayden Foster	brayden.foster@ufl.edu	3-5pm on Fridays
UF Online	Katherine Sturgeon	sturgeonk@ufl.edu	Asynchronous Discussion Boards
	Tatiana Copja	tcopja@ufl.edu	Asynchronous Discussion Boards

Office hours are open for all students via Zoom. However, to maximize help needed for students to be successful in the course, each student will be assigned to a TA Team for communication beyond office hours to discuss any specific questions, issues, exams, and homework assignments. Each TA Team will form a group page in Canvas to communicate with their group of students.

*Zoom office hour links will be on Canvas in the “Office Hours” page.

Mohammed Kyum (mkyum@ufl.edu) and Jacob Sheldon (jsheldon1@ufl.edu) are our Graduate Teaching Assistants this semester. The other TAs are undergraduate students who have taken this course before and are excited to help you succeed in it too.

Course Location and Time: All exams will be held synchronously in-person in **Turlington Hall, Room L007** from **7:00-9:00 pm** on exam days (see Course Outline below).

Course content and homework assignments are 80-99% online, accessible through Canvas (<https://elearning.ufl.edu>). Asynchronous lectures will be posted online in PowerPoint format with a voiceover recording along with Media Site links. Students may opt to download and run the PowerPoint presentations on their computer to view, or they may watch the Media Site video links also provided in Canvas.

Course Website: The E-Learning system Canvas (<https://elearning.ufl.edu>) is the online source for all the learning resources. All lecture learning objectives and suggested reading materials are uploaded in the “Files” folder of Canvas. Course announcements regarding general course information will be posted in Canvas throughout the semester. Students need to login with their GatorLink username and password for access. If you do not have a GatorLink ID, go to <http://gatorlink.ufl.edu> or to the Help Desk: 352-392-HELP for assistance.

Course Description: AGR 3303, Genetics, will present a comprehensive coverage of the principles, theory, and applications of genetics. Topics include the chemical nature and structure of genetic material, gene expression and regulation, cell division, chromosome number and structure variation, principles of inheritance, molecular genetic techniques, and basic concepts in population and quantitative genetics.

Course Objectives: Upon successful completion of this course students should be able to:

1. Define basic genetic terms.
2. Describe what chemical nature and structure of genetic materials are, how genes are expressed, and how gene expression is regulated.
3. Understand the chromosome structure, variation, gene mutation, and their effects.
4. Determine genotype and phenotype of progeny based on the parents’ genotypes or determine parental genotypes and phenotypes through analyzing their progeny’s genotypes and phenotypes.
5. Name and explain the basic molecular genetic techniques and their applications.
6. Extend knowledge learned in Genetics to other related areas, such as molecular genetics, quantitative genetics, population genetics, genomics, breeding, evolution, biochemistry, and biotechnology.

Prerequisites: A basic course in biology, botany, or zoology.

Required Text and Equipment:

1. Textbook: Genetics, A Conceptual Approach, Benjamin Pierce, 7th Edition.
2. Online Resources and Electronic Textbook:
Achieve is an online assignments and tutorial system from the textbook publisher and is required for AGR 3303. Achieve and e-book will be offered at the **lowest cost** option through UF All Access. If you wish to have a print copy of the text they will be provided in the UF bookstore.
 - a. To gain access to Achieve click on the following link <https://bsd.ufl.edu/allaccess>. This prompts you to log in with your GatorLink account.
 - b. Students are shown a list of classes in which they are enrolled that are participating in UF All Access, with the prices.
 - c. Students should click the **Opt-in** check box next to the class they are trying to get access to.
 - d. Students then need to click the button below to authorize the charges.
 - e. You will be given a code.
 - f. Log in to Genetics on Canvas
 - g. Click on Assignment
 - h. Click on Achieve
 - i. Click on the link that indicates Achieve will open in a new window
 - j. Log in or create an account
 - k. Once Achieve is open click on the payment link
 - l. Enter the code you received when you opted in to UF All Access
 - m. **Need Help?**
Answers to many common questions are found in our Student Support Community. If you need

direct assistance you can also contact technical support:
<https://macmillan.force.com/macmillanlearning/s/>

Grading and Assignment Summary:

Graded Activity	Points Each	Total Points
Exams (5*)	100	400
Achieve Homework (15*)	17	238
Seminar Reports (6)	22	132
Seminar Approvals (6)	2	12
Extra Credit Quizzes (10)	2	0**
Total		782

**Lowest score is dropped when final grades are calculated.*

***Extra credit quizzes are not required.*

1. **Final Grades:** Based on the total points of the best four out of five exams (400 points), the best fourteen out of fifteen homework assignments (238 points), and seminar reports (144 points).
2. **Exams** (52% of final grade):
 - a. Five 100-point exams will be given over the lecture material.
 - b. Students are not allowed to take the exam if they arrive late for the exam at the time when some students have turned in the exam and have stepped out of the classroom. A zero will be given for the missed exam.
 - c. Each exam will have 8 true/false questions worth 2 points each and 24 multiple choice questions worth 3.5 points each with a total of 100 points.
 - d. The final exam is comprehensive.
 - e. All of the exams will be held in-person in Turlington Hall, Room L007 from 7-9pm.
 - f. Notes, TI-83, TI-89, programmable calculators, cell phones and any secondary devices are not allowed for use during exams.
 - g. **Exam grades will be posted at 5pm on the next business day** following the exam.
3. **Makeup Exams:**
 - a. There will be no makeup exams, but the lowest exam grade is dropped.
 - b. If you miss an exam you can take the comprehensive final to replace the missed exam.
 - c. For excused absences during the semester, please contact the [Dean of Students Office](#), so that they can notify all of your instructors of the excused absence and how to proceed with makeup assignments.
 - d. If the [Dean of Students Office](#) approves the excused absence, we'll work together to find another alternative.
4. **Homework:**
 - a. Homework assignments will be delivered through Achieve.
 - b. Fifteen homework assignment due dates will coincide with weekly lectures.
 - c. Fourteen best homework assignments will be used towards your final grade. Each homework assignment is worth 17 points for a total of 238 points.
 - d. Late work: For excused absences during the semester, please contact the [Dean of Students Office](#), so that they can notify all of your instructors of the excused absence and how to proceed with extending due dates for assignments. If the [Dean of Students Office](#) approves the excused absence, homework due dates will be adjusted. *Without the excused absence, homework due dates will not be adjusted.* Achieve will accept late submissions and automatically deduct 10% off the

assignment points per day it is submitted late. The lowest homework score will be dropped while calculating final grades at the end of the semester.

5. Seminar Reports:

- Honors students are required to attend 6 genetics related seminars during the semester and to turn in written summaries of the seminars.
- These can be graduate student or faculty given seminars. Suggested sources of seminars are the Agronomy Department, Horticultural Sciences Department, Environmental Horticulture Department, Plant Molecular and Cell Biology (PMCB) Program, Forestry, Botany, Animal Sciences, The Vet School, Animal Molecular and Cellular Biology (AMCB) Program, and the Genetics Institute. Other sources may be suggested by the student.
- Students must identify and receive approval of all seminar topics before completing the summary.
- Each seminar approval and report is worth 24 points combined.

6. Extra Credit:

- Achieve adaptive learning quizzes are available for extra credit.
- There will be ten quizzes worth two points each.
- Please Note:** When Achieve pushes grade updates to the class gradebook in Canvas, it incorrectly displays the extra credit "assignment" as if it's scored out of 2 points instead of 0 points, so it will always appear to be scored out of 2 points in Canvas. However, the extra credit quizzes are scored out of 0 points, and the extra credit quizzes are *not* required. Please refer to the grade scale below to confirm your final score and grade in the class. (Of course, Dr. Riggs would be happy to answer any questions you may have as well!)

7. Grading Scale:

- A 90% (≥ 703.8)
 B+ 85% to 89.99% (664.7–703.79 points)
 B 80% to 84.99% (625.6–664.69 points)
 C+ 75% to 79.99% (586.5–625.59 points)
 C 70% to 74.99% (547.4–586.49 points)
 D+ 65% to 69.99% (508.3–574.39 points)
 D 60% to 64.99% (469.2–508.29 points)
 E< 60% (≤ 469.19 points)

Note: No minus grades are given

More information on grades and grading policies is here:

<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Passing Grade	A	B+	B	C+	C	D+	D	S
Grade Points	4.0	3.33	3.0	2.33	2.0	1.33	1.0	0

Course Outline:

Module/Lesson	Topics	Textbook Chapter	Assignment Date
Module 1			
Lesson 1	Introduction of the Course and Genetics	1, 2	
Lesson 2	DNA-RNA Structure	10	Ch 1 & Ch 10: 5/14/25
Lesson 3	DNA Replication	12	
Lesson 4	Transcription in Prokaryotes	13	Ch 12 & Ch 13: 5/15/25
Lesson 5	Transcription in Eukaryotes	13, 14	

Lesson 6	Translation	15	Ch 14 & Ch 15: 5/16/25
Honors	Honors Seminar Approvals #1, 2, 3, 4, 5, 6		5/16/25
	<i>Exam 1 Review</i>		<i>10-11am on 5/16/25 TAs will post a synchronous link and later the recording</i>
	Exam 1		7pm on 5/20/25 in TUR L007
Module 2			
Lesson 7	Regulation of Gene Expression in Prokaryotes	16	
Lesson 8	Regulation of Gene Expression in Eukaryotes	11, 14, 17	Ch 16 & Ch 17: 5/22/25
Honors	Honors Seminar Summary #1		5/23/25
Lesson 9	Gene Mutation and Repair	18	Ch 18: 5/23/25
Lesson 10	Cancer Genetics	23	Ch 23: 5/28/25
Lesson 11	Molecular Genetic Analysis	9, 19	Ch 19: 5/29/25
Lesson 12	DNA Sequencing Technologies and Genomics	19, 20	
	<i>Exam 2 Review</i>		<i>6-7pm on 5/29/25 TAs will post a synchronous link and later the recording</i>
Honors	Honors Seminar Summary #2		5/30/25
	Exam 2		7pm on 6/2/25 in TUR L007
Module 3			
Lesson 13	Mitosis and Meiosis	2	Ch 2: 6/3/25
Honors	Honors Seminar Summary #3		6/4/25
Lesson 14	Chromosomal Variations	8	Ch 8: 6/4/25
Lesson 15	Law of Segregation	3	
Lesson 16	Law of Independent Assortment	3	Ch 3: 6/4/25
Lesson 17	Extensions and Modification of Mendelian Principles	5	Ch 5: 6/5/25
	<i>Exam 3 Review</i>		<i>7-8pm on 6/4/25 TAs will post a synchronous link and later the recording</i>
	Exam 3		7pm on 6/6/25 in TUR L007
Module 4			
Honors	Honors Seminar Summary #4		6/9/25
Lesson 18	Sex Determination and Sex-Linked Characteristics	4, 23	Ch 4: 6/10/25
Lesson 19	Pedigree Analysis	6	Ch 6: 6/11/25
Lesson 20	Linkage and Recombination	7	
Honors	Honors Seminar Summary #5		6/12/25
Lesson 21	Gene Mapping	7	Ch 7: 6/12/25
Lesson 22	Quantitative Genetics and Population Genetics	24, 25	Ch 24 & Ch 25: 6/13/25
	<i>Exam 4 Review</i>		<i>7-8pm on 6/12/25 TAs will post a synchronous link and later the recording</i>
	Exam 4		7pm on 6/16/25 in TUR L007

Honors	Honors Seminar Summary #6		6/17/25
	Final Exam		7pm on 6/20/25 in TUR L007

NOTE: The instructor reserves the right to change any/all information contained in this and other materials in this course.

Online Course Evaluation Process: Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.blucera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

Syllabus Changes: This syllabus is subject to change. Any changes will be announced well in advance of deadlines.

Academic Honesty: UF students are bound by The Honor Pledge which states “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Conduct Code specifies a number of behaviors that are in violation of this code and the possible sanctions. See the UF Conduct Code website for more information. If you have any questions or concerns, please consult with the instructor or TAs in this class.

It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: <https://policy.ufl.edu/regulation/4-040/>

Software Use: All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

Services for Students with Disabilities: The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation.

0001 Reid Hall, 352-392-8565, www.dso.ufl.edu/drc/

Getting Help: For issues with technical difficulties for e-Learning in Canvas, please contact the UF Help Desk at:

- Learning-support@ufl.edu
- (352) 392-HELP -select option 2
- <https://lss.at.ufl.edu/help.shtml>

Any requests for make-ups due to technical issues MUST be accompanied by the ticket number received from LSS when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail your instructor or TA within 24 hours of the technical difficulty if you wish to request a make-up.

Campus Helping Resources: Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

- *University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575, <http://www.counseling.ufl.edu/cwc/>*
 - Counseling Services
 - Groups and Workshops
 - Outreach and Consultation
 - Self-Help Library
 - Wellness Coaching
- *Career Resource Center, First Floor JWRU, 392-1601, www.crc.ufl.edu/next-level*
- Student Complaints:
 - Residential Course:
https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf

Harassment: UF provides an educational and working environment that is free from sex discrimination and sexual harassment for its students, staff, and faculty. <http://www.hr.ufl.edu/eeo/sexharassment.htm>

Disruptive Behavior: Faculty, students, administrative and professional staff members, and other employees (hereinafter referred to as 'member(s)' of the university), who intentionally act to impair, interfere with, or obstruct the mission, purposes, order, operations, processes, and functions of the university shall be subject to appropriate disciplinary action by university authorities for misconduct, as set forth in the applicable rules of the Board of Regents and the university and state law governing such actions. Be advised that you can and will be dismissed from class if you engage in disruptive behavior. For more information: <http://regulations.ufl.edu/wp-content/uploads/2012/09/1008.pdf>

Twelve-Day Rule: Students who participate in official athletic or scholastic extracurricular activities are permitted twelve (12) scholastic day absences per semester without penalty. In any case, it is the student's responsibility to maintain satisfactory academic performance and attendance.

Commonly Asked Questions During the Course: Here are a few helpful answers to some of the most commonly asked questions during AGR3303. You're encouraged to reach out to Dr. Riggs at any time at kcasy@ufl.edu too!

1. Do I need to take the final exam?
 - a. No if you're happy with your first four exam grades, you don't need to take the final exam. If you opt not to take the final exam, it will appear as 0% in Canvas. When Dr. Riggs drops the lowest exam scores after the final exam, it won't affect your final grade for the course.
 - b. Yes if you'd like to replace one of your exam grades.
 - c. Yes if you missed an exam and your absence was not excused by the Dean of Students Office.
2. The extra credit is showing as 2/2 instead of 2/0 in Canvas. Can you fix this please?
 - a. No, unfortunately the extra credit from Achieve doesn't import into Canvas without being "assigned," so it shows as a required assignment (worth 2 points) in Canvas. Dr. Riggs corrects it at the end of the year when the gradebook is downloaded into Excel. This is also explained in Lesson 1 and listed in "Grading and Assignment Summary" #5 in the syllabus.
3. Is the extra credit already included in my grade?
 - a. Yes if you see the extra credit points (2) in Canvas, that means it's reflected in your "Total Points" in Canvas too. The extra credit is loaded into Canvas based on completion.
4. What's my current grade?
 - a. The most accurate way to calculate your grade is to divide your "Total Points" in Canvas by the points possible based on the number of exams (# of exams so far x 100pts) and the number of homework assignments you've completed (17 points each).
5. Why did my "Total Points" in Canvas go down?
 - a. At the end of the term (after the final exam and after the last homework is due) Dr. Riggs drops the lowest exam score and the lowest homework score. In previous semesters Dr. Riggs had included the drop function before the final exam and the last homework was due, and this led to students not completing the final assignments, thinking they would use those as their dropped assignments.
6. The Achieve homework has an error. What should I do?
 - a. If after troubleshooting with another browser, device, or UFIT, this does not fix the error with Achieve, please take a screenshot of the error. Please email Dr. Riggs with a description of the error that you encountered and attach the screenshot, and she'll file it and add the point back to your homework score at the end of the semester when she downloads the final gradebook into Excel. You won't see the update in Canvas.
7. Can I take the exam early?
 - a. No. Alternate exams are arranged for students when they have excused absences from the [Dean of Students Office](#). These alternatives are arranged after the regularly scheduled exam but not before the regularly scheduled exam.
8. Did you get my email?
 - a. Yes, and Dr. Riggs receives a lot of them. If you haven't heard back from Dr. Riggs within 48 hours Monday-Friday, you're encouraged to reach out to her again. Please wait at least one business day before sending a follow up message.
9. Can you share this opportunity with the class please?

- a. Please share any extra-curricular activities and leadership opportunities for fellow students in the extra-curricular discussion board in Canvas.
10. Can I serve as a TA?
- a. Students who are interested in serving as a teaching assistant are encouraged to complete the [AGR 3303 TA Interest Form](#). Thanks for your interest in supporting other students in their learning of Genetics!
11. Can you write a letter of recommendation for me please?
- a. Yes if you've served as an officer in a student organization that Dr. Riggs co-advises, served as a teaching assistant with her, or completed two or more courses with her, Dr. Riggs would feel comfortable speaking to your academic and leadership strengths.
 - b. No if you're a current student and have not received a final grade from Dr. Riggs.
 - c. No if you've been in contact with Dr. Riggs for less than 1 year.
 - d. No if you need the letter within two months. Dr. Riggs writes one letter per week, and she's booked out several months in advance. (For an example, it's currently 6/11/25, and Dr. Riggs is booked through July 2026.)