

BIOL 304, Genetics

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Bio 304: Genetics
Syllabus
Fall 2012

Time: Tuesday and Thursday, 9:30-10:45 am

Course Instructor: Dr. Mary Miller, millerm@rhodes.edu phone: 843-3556, FJ 104-W

Text: Concepts of Genetics (9th Edition). Klug, Cummings, Spencer, Palladino

Office Hours: Wednesday 12:00 – 2:00 pm, FJ 104W

Moodle Resource: <http://moodle.rhodes.edu/course/view.php?id=8375>

Expectations

It should go without saying that your conduct in this course must adhere in every regard to the Rhodes College Honor Code. This system is critical to maintaining the Rhodes Community, and we must all be diligent in our responsibilities. For more information on the Rhodes honor code system go to <http://www.rhodes.edu/campuslife/1478.asp>.

No lecture assignments, quizzes or exams may be turned in beyond the scheduled time unless medical or personal emergency warrants it. In such cases, the professor must be consulted for approval **prior** to the deadline or as soon after as possible. A doctor's notice might be required. In some cases, students may obtain permission from the professor to complete an assignment prior to the scheduled deadline. Missed assignments for unexcused reasons will receive a grade of 0.

Attendance: I expect that you will attend classes. There will be material covered in class that will be part of the exam and not found in the textbook. **During lecture exams, you may not leave the classroom until you have finished your exam. If you leave the room, I will collect your exam at that time.**

Participation: I expect that you should be engaged in the classroom and contribute with comments and questions during lecture and class discussions.

Cell phones: please turn your cell phones off while in class. There will be absolutely no texting while in class. **No cell phones allowed during examinations.** Cell phones must be stored out of sight during all exam, quizzes, and presentations.

Disabilities: accommodations will only be made to those who are registered with the office of Student Disability Services mccowenm@rhodes.edu

Communication: A primary mode of communication for the course will be email. **It is the student's responsibility to check email regularly to ensure that they have the most up to date information relevant to the course.** The Rhodes ITS Department (help@rhodes.edu; ext. 3890) will assist you with all hardware, software, and network questions. This syllabus will be followed closely, but it is subject to change depending on how the course progresses. Please refer to the online syllabus available on Moodle for the most current version.

Grading Policy - There will be a total of 600 possible points in the class. **You will receive the same grade for the lecture and laboratory sections of this course.**

1. 240 points (80 pts each) will come from the first three Exams. Exams may include objective (in class short answer, multiple choice, graphs, matching, problem solving) and subjective (essay) portions. Make up exams will not be offered, unless extreme circumstances exist.

To allow for some adjustments on your part for my teaching, possible sickness, or the occasional “bad day” that might influence one of your test grades, you will be allowed to average your final grade with one of your three exam grades (using percentile equivalents, and only if this will improve your overall grade).

2. 100 points will come from the cumulative final. The final exam will be a comprehensive, closed-book, timed exam. No make-up final exams will be given. **You MUST TAKE THE FINAL to pass this course** (ie, this is not a test you can drop). Please be mindful of the final date as you make arrangements to return home at the end of the semester.

3.70 points will come from quiz/iclicker/seminar summaries/participation.

In class discussions/iclicker question participation – 20 points. A total of 20 points and will be awarded for meaningful in class participation (10 points) and clicker question participation (10 points). You are expected to read all assignments and be ready to answer as well as ask questions about these materials.

Seminar Summaries– 10 points. You will be required to attend two departmental seminars and write a two page written summary of each. Each summary will be double spaced, fill at least two complete pages, and be worth 5 points, for 10 points total. Seminar summaries will be accepted up to one week after the date of the seminar.

Quizzes are worth 10 points each for a total of 30 points (the lowest quiz grade will be dropped). Quizzes will be taken via the Moodle course management system, which is accessible through the Rhodes home page or at <https://moodle.rhodes.edu/clogin.php>. Each quiz will be available for a 24-hour period starting at 8:00 AM on the respective date indicated in the lecture schedule; access is automatically closed after 24 hrs. A grade of zero will be assigned for any quiz not completed within the allowed time. You must complete and submit the quiz within the 24 hour period. If submission is not complete before the quiz closes, you will not get credit for any of the answers that you have entered.

No extended or alternate time will be provided to students who are unable to complete a quiz because of technical failures unless it has resulted from a system-wide problem.

Students are individually responsible for maintaining a reliable connection to the college network, for installing correct versions of software on any personal computers used for taking quizzes, and for learning how to operate efficiently within the Moodle system. A primary mode of communication for the course will be email. It is the student’s responsibility to check email regularly to ensure that they have the most up to date information relevant to the course. The

Rhodes ITS Department (help@rhodes.edu; ext. 3890) will assist you with all hardware, software, and network questions.

It is important to your progress in the course that your quiz grades provide accurate feedback about how well you're learning course material. Thus, **you may not use notes, books, or other forms of assistance while taking a quiz.** In addition – for practical reasons, quizzes each year include numerous questions that were asked before in preceding years. Therefore, your obligations under the Honor System include the following: **When studying for quizzes or exams you will not look at older copies that former students may have archived. You also will not show copies of any quiz or exam from this course to any other student, nor will you archive them for future students. You will be required to turn in your exams after the final. Failure to do so will result in a loss of points.**

4. 30 points will come from research presentation and a written summary of the presentations on a topic of the student's choice. Presentations will be given during the last weeks of classes.

5. 160 points will come from your Laboratory grade.

The laboratory grade is explained in the laboratory syllabus.

6. The honor code applies to all work done in this course.

7. Your first four absences from the class will not impact your grade. The fifth absence will result in a 5 POINT REDUCTION from your total points in the course (no matter the reason for the absences). Further absences will result in further penalty of points at the instructor's discretion.

8. You are expected to get to class on time. Tardiness will result in further penalty of points at the instructor's discretion.

9. You will not be allowed to leave the classroom once a timed in class exam has begun. Exams are designed to last approximately 45 minutes to one hour, and should be manageable in this sense.

The Grading Policy is summarized below:

Lecture	
3 exams	240 points
Cumulative final	100 points
Quizzes/Participation/Summaries	70 points
Research Project Presentation	30 points
Laboratory	<u>160 points</u>
	600 points

Your grade will be determined by the total number of point accumulated during the semester in both the lecture and laboratory sections of the course. The grading scale below will be used to determine the letter grade that will be assigned for ranges of points earned in the course. **This same letter grade will be assigned for both of the Biology 304 and 304L courses.**

Grading scale:

Points Grade

558-600	A
540-557	A-
522-539	B+
498-521	B
480-497	B-
462-479	C+
438-461	C
420-437	C-
402-419	D+
378-401	D
360-377	D-
359 and below	F

Missed assignments for unexcused reasons will receive a grade of 0. This policy holds true for laboratory assignments as well as Lecture exams and quizzes. The cumulative final in the laboratory is a practical exam, meaning that in addition to testing knowledge and synthesis of content presented in the laboratory exercises, the student will be required to carry out some physical aspects of the laboratory exercises (ie, streaking plates, identifying morphologies, working with arrays). For this reason, no makeup will be available for the cumulative laboratory final. Please plan ahead so that you will not miss this date.

Statement on attendance to laboratory: Attendance is mandatory. Lack of attendance will result in a reduction in grade. **If you are unable to attend laboratory on Tuesday afternoons because of extracurricular activities, you should not take this course.**

The lectures are aimed at explaining the material, showing you problem solving strategies, and helping you to focus on the concepts that are emphasized in the course. You are responsible for material covered in the lectures as well as specified reading assignments. Selected PowerPoint presentations from lectures will be put on Moodle and you are encouraged to download these presentations prior to class. Study guides and practice sheets will also be available on Moodle – you should take advantage of these.

Day	Date	Topic	Readings/Evaluations
Thursday	Aug 23	Complexities of the Central Dogma	
Friday	24	Practice Quiz Opens at 8:00 am and closes on Monday at 8:00 am	PRACTICE QUIZ
Tuesday	28	Laboratory Prep: Cancer Genetics	How Cancer Arises Ch. 19.1
Thursday	30	Nucleic Acid and DNA Replication	DNA Structure Review DNA replication Review Ch 10.1, 10.6-7, 10.9, 11.1-11.7
Monday		Quiz 1 Opens at 8:00 am for 24 hrs	QUIZ 1
Tuesday	Sept 4	DNA Recombination	DNA Recombination Review Ch 11.8
Thursday	6	Chromatin; DNA Organization	Chromatin Review Ch 12.1-12.2, 12.4-12.7
Tuesday	11	DNA Repair, Checkpoints, And DNA Replication	Cell Cycle Review Ch. 15.5, 19.2-19.4
Wednesday		Quiz 2 Opens at 8:00 am for 24 hrs	QUIZ 2
Thursday	13	Mitosis and Meiosis	Mitosis Review Meiosis Review Ch 2.1-2.6
Tuesday	18	Mendel and Pedigrees	Mendel Review Ch 3.2-3.9
Thursday	20	In class exam	EXAM I
Tuesday	25	Gene Expression	Gene Expression 1 and 2 Reviews Ch 13.1, 13.4, 13.6-8, 13.10-13
Thursday	27	Gene Expression	Gene Expression 1 and 2 Reviews Ch 14.1-4, 14.8-12
Tuesday	Oct. 2	Mutations	Mutations Review Ch. 15.1-3, 15.8
Wednesday	3	Quiz 3 Opens at 8:00 am for 24 hrs	QUIZ 3
Thursday	4	Regulation of Gene Expression	Regulation of Gene Expression Review Ch 16.1-8
Tuesday	9	Regulation of Gene Expression	Regulation of Gene Expression Review Ch 17.1, 17.3-17.7
Thursday	11	Functional RNA	Ch. 17.8
Tuesday	16	<i>Fall Break – no class</i>	
Thursday	18	In class exam	EXAM II
Tuesday	23	Remember Mendel: Pedigrees	Linkage and Mapping Review Ch 3.2-3.9
Thursday	25	Remember Mendel: Genetic Mapping	Linkage and Mapping Review Ch 3.4, 3.7-3.8
Tuesday	30	Gene Interactions	Extensions of Mendel Review Ch 4.1-4.12
Thursday	Nov. 1	Gene Interactions	Extensions of Mendel Review

			Ch 4.1-4.12
Tuesday	6	Genetic Dissection of Biochemical Pathways	Genetic Dissection of Biochemical Pathways Ch. 4.7, 4.9
Wednesday	7	Quiz 4 Opens at 8:00 am for 24 hrs	QUIZ 4
Thursday	8	Extranuclear Inheritance	Ch. 9.1-2, 9.3
Tuesday	13	Non-Mendelian Regulation of Gene Expression	Ch. 23.1-3, 23.5, Ch. 24.3
Thursday	15	In class exam	EXAM III
Tuesday	20	Population Genetics	
Thursday	22	<i>Thanksgiving – no class</i>	
Tuesday	27	Population Genetics	
Thursday	29	Student Presentations	PRESENTATIONS
Tuesday	Dec. 4	Student Presentations	PRESENTATIONS
Tuesday	11	Cumulative Final 5:30 PM	FINAL

Statement on inclement weather:

It is incredibly rare for me to cancel class.

If Rhodes is open, I will get here. If Rhodes is open – COME TO CLASS.

The College notifies if Rhodes closes or if its daily schedule is altered by:

1. A phone message that can be accessed by all students, faculty and staff. The number is 843-3943. 2. Local media stations: WMC-TV, Channel 5, WREG-TV, Channel 3, WMC AM 790, WREC AM 600, WKNO FM 91.1, WMC FM 100, WEGR FM Rock 103 Please do not call local media stations for closing or opening information. They will report on air what Rhodes College officials have communicated to them as soon as our decision has been made known to them.