GENE 3200 (Fall 2012)
Syllabus and Course Materials
Tracie M. Jenkins, Ph.D

Office	Availability	Phone #	Email
Redding Building #125	MW 12:00-1:00 PM	770-412-4093	jenkinst@uga.edu Usually read email in the morning before 8 AM.

Other Instructors: Mr. Brian Wrenn, Instructional Technologist, Griffin (770-229-3023; SLCIT@uga.edu); Ms. Manju Chandran, on-site facilitator, Tifton (706-206-5047; manjusre@uga.edu)

Prerequisites
(CHEM 2211 or CHEM 2311H or CHEM 2411) and (CHEM 2211L or CHEM 2311L or CHEM 2411L)

Pre or Corequisites
(BIOL 1104 and BIOL 1104L) or BIOL 1108-1108L

Lectures
9:00 AM - 10:45 PM, MW; SLC 116 and occasionally SCL 204 (check syllabus); Tifton long distance classroom.

Required Materials

Textbook: Pierce BA. 2008. *Genetics: A Conceptual Approach*. 4rd Ed. W.H. Freeman and Co., NY. (Hardcover or eBook)

Study Guides: Choi J. H., McCallum M E. 2012. Solutions and Problem-Solving Manual (Paperback). To Accompany *Genetics: A Conceptrual Approach* 4rd Ed.

Resources: Refer to eLearning for web links and online learning experiences, i.e. Khan Academy

Course Description and Learning Outcomes
GENE 3200 is a rigorous first course in genetics in which basic genetic concepts are reinforced and learned through problem solving. Since population genetics is covered in GENE (BIOL) 3000, the emphasis of this class will be transmission and molecular genetics. The course is taught from an inter-disciplinary perspective with the assumption that students understand and can apply the scientific method and their knowledge in general biology, basic inorganic and organic chemistry and math to master essential genetics concepts through problem solving and data analysis (refer to assignments below). Students who take this course will demonstrate:

- Comprehension of concepts by applying concepts to solving general and challenging problems in transmission and molecular genetics.
- Building of conceptual knowledge through integration of previously learned concepts to solving new and more difficult problems as well as in participation in class discussions.
- Mastery of concepts by earning 100% on quizzes (refer to syllabus).
- Knowledge of material and understanding of concepts by passing exams covering specified material (refer to syllabus).
- Ability to present knowledge orally by presenting a well-researched, concept integrated PowerPoint-assisted oral presentation on a specific cancer genetic topic (refer to Chapter 23).

Academic Integrity/Academic Honesty Policy
As a University of Georgia student, you have agreed to abide by the University's academic honesty policy, "A Culture of Honesty," and the Student Honor Code. All academic work must meet the standards described in "A Culture of Honesty" found at http://www.uga.edu/honesty. Lack of knowledge of the academic honesty policy is not a reasonable explanation for a violation. Questions related to

course assignments and the academic honesty policy should be directed to the instructor. All violations of the *Honor Code* will be referred to the Assistant Dean for Academic Affairs' office. Cheating on any academic endeavor in this class will result in a grade of "**0**" for the specific task.

Disability Accommodation Statement

(For Griffin Campus)

If you have a disability and require classroom accommodations, you must see me immediately after the first class or make an appointment to see me during my office hours. If you plan to request accommodations for a disability, please register with the **Disability Resource Center** through the Office of Student Affairs, 105 Flynt Building, and 770-229-3464.

Attendance

- **Mandatory**. Students are expected to attend and participate in all class sessions.
- No cell phones or cell phones must be turned off during class.

Homework

- Students are expected to have completed homework prior to coming to class.
- Assigned quizzes on homework require mastery (refer to Quizzes). They are always assigned for homework after class on Wednesday and must be completed by 7 AM the following Monday.

Exams

1. One-hour long, scheduled in the syllabus and taken online ***Griffin SLC 204 & Tifton Classroom***
2. Covers mostly new material. Since understanding genetics concepts is based on cumulative knowledge, there will always be material from previous tests.
3. Oral presentation (Chapter 23: Cancer Genetics) will count as a single **Exam** grade. The graded is based on: presentation (80%) + references (20%) (refer to Course Descriptions and Learning Outcomes) = 100%. This presentation will be:
    - 10 minutes, eight minutes for the presentation and two minutes for questions.
    - graded according to the rubric in the syllabus and **count as an exam grade**.
    - the result of a focused literature review based on at least 10 recent refereed journal articles,
    - references written according to style accepted by the journal *Molecular Phylogenetics and Evolution*
    - approved by the Professor and all students must schedule at least one session with Dr. Jenkins to go over content of talk.
4. The **Final Exam** is comprehensive and counts 25% of the grade.
5. With a doctor's excuse, a student may make-up one missed exam, which, although covering the same material will be different from the exam given to students at the allotted time.

Quizzes

1. Purpose: To assess each student's acquisition and understanding of core research methods, facts and concepts. Thus all students must master a core set of knowledge gained through reading the required textbook chapters, reviewing lecture and other PowerPoints on eLearning, viewing video presentations from Khan Academy and other sources, and working required homework problems.
    - Mastery is defined as attaining a score of 100% correct on assigned quizzes. No credit $<$100% will be given. But you may take each quiz as many times as you want from the time the quiz is made available on a Wednesday at 11 AM until 7:00 AM the day of class on the following Monday (see syllabus) when access to the quiz will no longer be available.
    - Quiz grades are, therefore, either 100% or **0**

Final Exam (Comprehensive)

SLC 204, 12/10/12, 8 AM-11 AM.

ORAL PRESENTATION (80%)

Organization and Content (45%):	**Poor**		**Avg.**	**Good**	**Excellent**
Appropriate Introduction	1	2	3	4	5
Clear Thesis	1	2	3	4	5
Presentation Organization	1	2	3	4	5
Adequate **Support** for Ideas	2	4	6	8	10
Definite Conclusion	1	2	3	4	5
PowerPoints (Appropriateness & Effectiveness)	1	2	3	4	5
Q & A Session-Knowledge of Topic	1	2	3	4	5
Use of Allotted Time (10 min, 8 min + 2 min for questions)	**1**	**2**	**3**	**4**	**5**
Presence (15%):					
Physical Appearance, Neatness, and Grooming	1	2	3	4	5
Posture, Gestures, and Movement	1	2	3	4	5
Eye Contact	1	2	3	4	5
Delivery and Grammar (40%):					
Enthusiasm and Vocal Variation (freedom from monotone)	1	2	3	4	5
Preparation and **Knowledge** of Materials	1	2	3	4	5
Effectiveness of Delivery Method (PowerPoint)	1	2	3	4	5
Vocabulary and Use of Appropriate Words	1	2	3	4	5
Freedom from Distracting "Uh"s & "Like"s, etc.	1	2	3	4	5
Pronunciation, Enunciation, Audibility, and Clarity	1	2	3	4	5
Grammar	2	4	6	8	10
Total points (percent) per column	**20**	**40**	**60**	**80**	**100**

Grading

Quiz %	Exam %	Final Exam %	Total %
25%	50%	25%	100%

A = 4.00 (94-100%) **B- = 2.70** (80-81 %) **D = 1.00** (61- 69%)
A- = 3.70 (90-93 %) **C+ = 2.30** (78-79 %) **F = 0.00** (≤60%)
B+ = 3.30 (87-89 %) **C = 2.00** (72-77 %)
B = 3.00 (82-86 %) **C- = 1.70** (70-72 %)

Refer to http://www.bulletin.uga.edu/PlusMinusGradingFAQ.html#Q1 for more information.

***The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary (WP = worked problems, OP odd problems, EP= even problems, AP = all problems).* PowerPoint presentations will be on elearning Commons after class period.**

Assignments: Homework is to be *completed prior to coming to class.* B**old numbers**,e.g.**1, refer to Chapters**, WP = worked problems, AP = all problems, EP = even problems, OP = odd problems

DAY/DATE	TOPIC	CHAP	HOMEWORK
M, 8/13	**Basic Biology Review**: Introduction & Chromosomes (TJ), Technology Overview (BW)	1,2	**1**: Terms, AP **2**: Terms, WP
W ,8/15	Integrated online learning tools (Mr. Brian Wrenn) Griffin SLC 204, Tifton classroom	2	Quiz #1. **2**: OP,
M, 8/20	Mitosis, Meiosis, Chromosome theory online learning tools (Mr. Brian Wrenn) Griffin SLC 204, Tifton classroom	2	**2:** EP, PowerPoint Chapter Problems 1,2
W, 8/22	**EXAM 1: SLC 204, Tifton classroom (Mr Brian Wrenn)**		**3**: Terms & WP
M, 8/27	Basic Principles of Heredity	3	**3**: Problems 1-20
W, 8/29	Heredity	3	Quiz #2. **3**: AP. **4:** Terms, WP, OP
M, 9/3	**Labor Day Holiday**		
W, 9/5	Heredity, Sex determination	3,4	**4**: Terms, WP, OP
M, 9/10	Sex	4	**4**: AP. **5:** Terms, WP
W, 9/12	Modifications of Basic Principles	5	**5:** Terms, WP, AP
M, 9/17	Pedigree Analysis	6	Quiz #3. **6**. AP
W, 9/19	Pedigree Analysis, Review	6	**Study for exam**
M, 9/24	**EXAM 2:SLC 204, Tifton classroom**	1-6	**7:** Terms, WP
W, 9/26	Linkage, Recomb, Gene Mapping	7	**7:** AP **8:** Terms, WP
M, 10/1	Linkage cont., Bacterial systems	7, 8	**8**: OP
W, 10/3 (**Midterm**)	Viral Systems	8	Quiz #4 **8**: EP. **9:** Term, WP
M, 10/8	Chromosome variation	9	**9:** AP. **10:** Terms, WP
W, 10/10	DNA	10	**10:** AP. **12**: Terms, WP
M, 10/15	DNA Replication/Recombination	12	**12**: OP
W, 10/17	DNA Replication/Recombination	12	Quiz #5 **12:** AP, Study for EXAM 2
M, 10/22	**EXAM 3: SLC 204, Tifton classroom**	7-12	**13**: Terms, WP
W, 10/24	Transcription	13	**13:** AP. **14**: Terms, WP
M, 10/29	Transcription, RNA	13,14	**14:** OP
W, 10/31	RNA	14	Quiz #6 **14:** AP. **15:** Terms, WP
M, 11/5	Translation	15	**15:** OP
W, 11/7	Translation	15	**15:** AP. **16:** Terms, WP
M, 11/12	Gene Expression-Prokaryotes	16	
W, 11/14	Gene Express.-Prokaryotes, Eukaryotes	16, 17	Quiz #7 **16**: AP. 1**7**: OP
11/19-23	**THANKSGIVING HOLIDAY**		
M, 11/26	Gene Expression-Eukaryotes	17	**17:** AP. 1**8:** Terms, WP
W, 11/28	Mutations/Repair	18	**18:** AP
M, 12/3	Mutations/Repair & Review		
W, 12/5	**Oral Presentations (Exam #4), SLC 116, Tifton classroom**		
M, 12/10	**FINAL EXAM : 8 – 11 AM : SLC 204 & Tifton classroom**		