

BIO240 General Genetics Section 29697 & 42757

Syllabus – Spring Semester 2012

Prof. Gregory Hocutt

E-mail: hocutt@mesacc.edu

Office: NU185

Office Phone: (480) 461 - 7762

Office Hours: Mondays, Wednesdays, Fridays online
and by appointment
AND
Tues. and Thur. 1:00 p.m. – 1:50 p.m.

Website: <http://www.mesacc.edu/~hocutt> - Make use of the screencast materials under the BIO240 link on this website. You will want to use the Lecture Materials and Problem Solutions links.

Books: *iGenetics: A Molecular Approach*, 2nd Ed. **OR** 3rd Ed. (**Required**)
Peter J. Russell
ISBN 0-8053-4665-1 (Second) or ISBN 0-321-56976-8 (Third)

Note that you can use either the second or third edition of this text. The course material is still geared to the second edition, but material will be shifting to the third edition. There will be no penalty to any student using either edition. The course will plow through this text at a very fast pace. **YOU MUST HAVE THIS TEXT AVAILABLE TO YOU.** There are several ISBN numbers for each edition depending upon whether they are hardcover or softcover and whether they are an “International” edition. As long as the title, edition and author match, they are probably all fine. Check with me if you have a question

ONLINE MATERIALS WILL REQUIRE THAT YOU PURCHASE SEPARATE ACCESS CODE to access WebCT/Blackboard material generated from the publisher. The cost for the code has been about \$15 in the past. When you first log-in to WebCT, you will be prompted for an access code. **THIS IS NOT THE ACCESS CODE THAT COMES WITH YOUR TEXT.** There is a link (top half of right side of screen usually) that will take you to the publisher’s site where the access code for these material can be purchased.

BIO240 is a course in General Genetics intended to cover material equivalent to a junior level university genetics course. The course covers intensive introduction to historical perspective, Mendelian insights and patterns of inheritance, exceptions to expected Mendelian ratios, quantitative genetics, non-Mendelian inheritance, pedigree analysis, molecular levels of gene expression, genetic control of metabolic pathways, analytic dissection of molecular mechanisms behind DNA replication, transcription, translation, gene regulation in both prokaryotes and eukaryotes, population genetics, genetics of behavior, and genetics of evolution and speciation.

Arizona Revised Statutes § 15-151 specifies that every student, teacher and visitor in community colleges must wear appropriate protective eye wear while participating in or when observing

vocational, technical. industrial arts activities involving exposure to: molten metals; molten materials; cutting, shaping, and grinding of materials; heat treatment; tempering or kiln firing of any metal or other materials; welding fabrication processes; explosive materials; caustic solutions; and radioactive materials.

Attendance Policy: Except for exams, your attendance is online. There is a lot of work and a lot of deadlines. Major deadlines are given at the end of this syllabus. (You are never going to loose out if you read ahead, however). As long as you complete the learning modules and problems sets on time, you should be in good shape. **IF YOU FAIL TO “SHOW UP” ONLINE AND TURN IN PROBLEM SETS WITHOUT COMMUNICATING WITH ME, YOU WILL BE GIVEN A FAILING GRADE AND DROPPED FROM THE CLASS.** Do not miss a problem set deadline without contacting me! If life gets in the way be sure to contact me so that you are not dropped with a failing grade. The reasons for this policy involve both student financial aid qualifications and also community college fiduciary responsibilities along with others.

The only on-site attendance required is for the midterm exams (Midterm I - Feb. 25th; Midterm II – March 31st) and the final exam (May 5th). The exams will be held onsite at MCC Southern and Dobson Campus. **You will be required to bring photo I.D. to take these exams.** (IF you are from out of state, you must arrange to take these exams in a local proctored institutional setting where your identity can be verified and your ‘exam behavior’ can be proctored).

Disability Statement: The college will make reasonable accommodations for persons with documented disabilities. Students should notify Student Services and their instructors of any special needs.

Grading Policy: The grade *you earn* for the course will be determined based upon 2000 points:

1800 points and above	=	A
1600 - 1799 points	=	B
1400 - 1599 points	=	C
1200 - 1399 points	=	D
1199 and less	=	Fail

Formal exams make up 1200 points of the total possible. We are scheduled to have two (2) midterm exams and one final exam worth 400 points each. These exams will require two to three hours of on-site testing. Photo I.D. will be required to take these exams. **YOU CAN NOT RECEIVE A GRADE OF “C” OR HIGHER UNLESS YOU PASS ALL EXAMS WITH A 60% OR BETTER SCORE.**

The remaining 800 points of your course grade will be divided between problem sets and online quizzes. You will be graded on five (5) problem sets each of which will count for 100 points. Make every effort not to fall behind on the problem sets. These activities are designed to give you ample

practice for the course exams. There will be an initial quiz on the syllabus (required to continue in the course but not included as points toward your grade) and then 10 online quizzes worth 30 points each.

Requirements for Online Presentation Format:

You will need Adobe Acrobat Reader or another PDF reader to download and print off the Problem Sets. If you do not currently have this software, you can follow a link to the Adobe website from my webpage at MCC (<http://www.mesacc.edu/~hocutt>). Go to the BIO240 home and follow the link there. **Once you have printed off the Problem Sets in pdf format, you will need to answer the questions and fill out those answers *in your own handwriting*. Typed answers will NOT be accepted.** You will scan the answered Problem Sets INTO PDF FORMAT and send them to me via attachment to e-mail or into the Assignment Dropbox within the online course. Your first week's assignment requires that you scan the Student Agreement and send it to me via e-mail attachment or into the Assignment Dropbox, so we will have any bugs worked out of this process very soon.

Your exams, (two midterms and final) will be NOT BE ONLINE. Instead, they will be given on the MCC Campus at Southern and Dobson. (If you are out-of-state or significantly out-of-town, YOU will need to make arrangements to have the test taken at another location. Contact me for details). Midterm I is scheduled for Feb. 25th; Midterm II is scheduled for March 31st, and the final exam is scheduled for May 5th. You are responsible for being available for the exams.

When you first enter the Online learning program on your computer (currently Blackboard Learning Systems OR WebCT) you will want to find the "Check Browser" link and have your system checked for compatibility with the online presentation system.

Also make ample use of the resources at MCC Online and be sure to check the [Orientation](#) section for Prospective Students.

EARS (Early Alert Referral System): MCC is committed to the success of all students. Numerous campus support services are available to assist you in achieving your educational goals. MCC has adopted an Early Alert Referral System as part of a student success initiative to aid students in their educational pursuits. Faculty and staff participate by alerting and referring students to campus services for added support. Students may receive a follow up call from various campus services as a result of being referred to EARS. Students are encouraged to participate, but these services are optional.

<http://www.mesacc.edu/students/ears>

BIO240 Spring Semester 2012 – Projected Schedule

WEEK OF	SUBJECT MATTER	CHAPTERS 2 nd ed. 3 rd ed.	ASSIGNMENTS
Jan. 16	Cellular Review, Intro to Genetics, Genetic Material, DNA Replication	1, 2, 3	Learning Modules 1 and 2
Jan. 23	Gene Expression; Transcription	4,5	Learning Module 3
Jan. 30	Translation, Genetic Code	6	Learning Module 3 Problem Set 1 Due Feb. 3rd
Feb. 6	Mutations and Gene Expression	7, 8	Learning Module 4
Feb. 13	Biotechnology; Genomics	8, 9 10	Learning Module 4 Learning Module 5 Problem Set 2 Due Feb. 17th
Feb. 20	Gene Regulation (Pro- and Eukaryotes)	19, 20 17, 18	Learning Module 6 MIDTERM EXAM I Saturday, Feb. 25th @ 9:00 a.m.
Feb. 27	Mendelian Genetics I; Chromosomal Basis of Inheritance; Pedigree Analysis	11, 12	Learning Module 7
Mar. 5	Mendel II: Extensions to Mendelian Genetics	13 23	Learning Module 8; Learning Module 9
Mar. 12	SPRING BREAK		
Mar. 19	Gene Mapping in Eukaryotes	15, 16 14	Learning Module 10 Problem Set 3 Due Mar. 23rd
Mar. 26	Quantitative Genetics	14 22	Learning Module 10 MIDTERM EXAM II Saturday, March 31st @ 9:00 a.m.
Apr. 2	Variations in Chromosome Number and Structure; Gene Mapping (Bacteria, Bacteriophages)	17, 18 15, 16	Learning Module 11 Problem Set 4 Due Apr. 6th
Apr. 9	Population Genetics	24, 21	Learning Module 12
Apr. 16	Population Genetic Applications; Developmental Genetics	24, 21 21, 19	Learning Modules 12 and 13
Apr. 23	Genetics of Cancer	22 20	Learning Module 13 Problem Set 5 Due Apr. 24th
Apr. 30			FINAL EXAM Saturday, May 5th @ 9:00 a.m.