

PCB 3063 - Genetics - Fall 2015

(Section 0001) Tues & Thurs 10:30 – 11:50 am (CB1-121)

3 credit hours

Instructor: Dr. Cynthia Bayer

Email: Webcourses@UCF

Phone: 407-823-1460

Office: BIO 202D

Office Hours: Tues & Thurs: 12:00 – 2:00 pm

Friday: 1:00 – 2:00 pm

GTA: Minpei Wang

Email: Webcourses@UCF

Office: BIO 201

Office Hours: Tues & Thurs: 9:00 – 10:30 am

Undergraduate Assistant:

Johnathan Berman

Office: BIO 211

Office Hours: Wed 10:00 am – 12:00 noon

Required Textbook: Genetics - A Conceptual Approach, 5th ed., Pierce (2014) W.H. Freeman and Co.

Loose-leaf ISBN: 978-1-4641-5085-2 or Hardcover ISBN: 978-1-4641-0946-1

Required i>clicker: We will be using the i>clicker classroom response system on a daily basis in activities that count for 10% of your course grade. You will need to bring an i>clicker remote with you to every class lecture. It would be wise to bring extra batteries as well. The purchase of a remote is NOT optional. You must register your remote for this course no later than **SEPT 3, 2015**. TO REGISTER: in **Webcourses** click on the i>clicker tab. Follow the instructions to type in your clicker ID (under the barcode on the back of your remote). You may use an **i>clicker+**, or the alphanumeric-capable **i>clicker2** remote, as I will only utilize multiple-choice responses to questions in this course.

Course Prerequisites: CHM 2046 and a grade of C or higher in BSC 2010C (Biology I)

Purpose of the course: PCB 3063 is a general genetics course required for several majors such as Biology, Biochemistry Track for Chemistry and Forensic Sciences. It can also serve as a Restricted Elective for majors such as Health Sciences and Biomedical Sciences. Additionally, PCB 3063 is a prerequisite for several upper level courses such as Evolutionary Biology (PCB 4683), Molecular Cell Biology (PCB 3023), and Population Genetics (PCB 4684).

Important Information for Financial Aid:

- Faculty members are required to document students' academic activity at the beginning of each course. In order to document that you began this course, please complete the **Syllabus Quiz**, found in our Webcourses' Quiz section, by **5:00 pm AUG 28, 2015**. Failure to do so will result in a delay in the disbursement of your financial aid.
- All students will receive credit for completion of the Syllabus Quiz.

Course website: Access our course website at Webcourses@UCF via the myUCF portal using your NID and password. There you will find a folder of **Lecture PowerPoints** for you to print and bring to lecture. These PowerPoint slides are sized to be legible when printed at 6 slides per page. You will also find links to the **syllabus**, **homework problems**, **quizzes**, **websites**, and **grades**.

Communication: I will communicate with students via Announcements or email within Webcourses. I will attempt to respond to all emails within 24 hours, Monday -Friday.

Course Grade:

60% = Best 3 out of 4 lecture exams (100 points/exam)

20% = Required Final Exam (100 points)

10% = Quizzes @ Webcourses

10% = i>clicker points (class participation and graded questions)

- Students are responsible for keeping track of their own grades and identifying issues within 2 weeks of any grade posting in Webcourses.
- There will be **no curving** of final grades.
- Letter grades for the semester will be awarded according to the scale below. Letter grades will adhere to this percentage range with no exceptions.

A = 90-100%

B = 80-89%

C = 70-79%

D = 60-69%

F = 59% and below

- Final semester grades will be rounded up to the nearest whole number; *e.g.* 89.5% will round up to a 90% and therefore an A. 89.4% will round down to an 89% and will remain a B.

Lecture Exams: There will be 4 lecture exams, each worth 100 points. The exams will be based on material covered in lecture, including some notes and diagrams that are not included in the PowerPoint slides available at our Webcourses website. Therefore, students who routinely skip lectures will be at a significant disadvantage. The lowest grade of the 4 lecture exams will be dropped automatically.

Final Exam: All students are required to take the COMPREHENSIVE (covering all material from the semester) Final Exam, worth 100 points. The Final Exam will be given in our lecture classroom, CB1-121 according to the UCF Final Exam Schedule for Fall 2015, on **Tues, Dec 15, 10:00 am - 12:50 pm.**

Quizzes: A short quiz will be assigned in Webcourses for each chapter. The opening and due dates for each quiz will be announced in class. Quizzes will be automatically graded and posted in Webcourses. After the **Due** date for any quiz has passed, you will not be able to get credit for that quiz. The lowest grade of all quizzes will be dropped automatically. Quizzes make up **10%** of your course grade.

i>clicker: The points earned from i>clicker class participation and graded questions each day will comprise **10%** of your course grade. For each class period, 3 points are earned for participation (= answering all questions, or all but one question) plus additional points for graded questions (1 point for each correct answer and 0.25 point for each incorrect answer).

Homework: End-of-Chapter questions will be assigned as homework for each chapter. These questions will be listed at the end of each chapter's PowerPoint presentation, as well as on the Homework page at Webcourses. You will not submit homework answers or receive credit, but are strongly encouraged to complete these problems for a better understanding and review of the concepts discussed in lecture.

Taking Exams:

- All exams will use scantrons that will be provided with each exam. Lecture exams will consist of both multiple choice and short answer questions.
- You will need to bring a #2 pencil and a photo ID, and know your PID to fill in the scantron.
- If you arrive within 15 minutes after the start of an exam, you will be allowed to take the exam. However, you must turn in the exam paper at the scheduled end of the exam period. You will not be allowed extra time unless a documentable emergency has occurred (see below).

Missed Exams: If a student misses an exam for an unexcused event, that will be the dropped grade.

Make-Up Exams:

- A make-up exam for any of the 4 lecture exams will be arranged **ONLY** if you must miss the exam due to official University of Central Florida business at which your presence is required (e.g. university sponsored team event) or for documented U.S. Military related business (e.g. Reserve Duty activities).
 - You must provide me documentation that contains your name and the date affected **within 1 week prior to** the exam date.
 - Students are responsible for arranging with me a time to take the makeup exam so that makeup exams are completed before exams are released to all students.
- If you miss an exam for any other legitimate documented reason that circumstances beyond your control prevented you from taking the exam (including, but not limited to, major illness, serious family emergency, death in the family, jury duty, etc.), you will receive a zero for your missed exam and that will be the exam automatically dropped from your final grade calculation, initially.
 - If I approve the absence based on your documentation from an appropriate authority (doctor, police, judge, etc.) **provided within 1 week of missing the exam**, your Final Exam grade may substitute for this missed exam if your final course grade is affected by missing the exam.
 - Your lowest lecture exam score will still be dropped even with the Final Exam substitution.
- For all other situations (e.g. forgetting there was an exam, oversleeping, coming in after 15 minutes):
 - You will receive a zero on this exam, and it will most likely be the lowest score dropped from your final course grade.
 - You do not need to provide any documentation for the missed exam in order for it to be dropped from your grade.
 - You will **NOT** be eligible for the Final Exam grade substitution for these undocumented or unapproved absences.

Reviewing Exams:

- Scantrons and exams will **NOT** be returned to students.
- If you wish to view and/or receive a printed copy of your individual exam report sheet (with all correct and incorrect responses indicated), you must make a request in person with Dr. Bayer **within 2 weeks** of an exam grade being posted in Webcourses.
 - Once the 2 week window is over for an exam, you may **NOT** review your individual exam for the rest of the semester.
 - You must resolve **any** grade concerns within the two week time period as well.

Classroom Conduct: By enrolling at UCF, all students have agreed to abide by the Golden Rule. Please become familiar with this document at <http://www.goldenrule.sdes.ucf.edu>

- Because of the challenges inherent with a class of this size, **please**
 - arrive and depart on time,
 - refrain from talking during class
 - place cell phone on vibrate
- Students who fail to follow these basic courtesy rules will be asked to leave.
- Laptop use is allowed for course-related use only! If I receive complaints that your YouTube or Netflix viewing interferes with other students' ability to concentrate and learn in this classroom, I WILL PROHIBIT ALL LAPTOP USE.
- Audio recording of lectures is permitted.

Academic Integrity: As reflected in the UCF creed, integrity and scholarship are core values that should guide our conduct and decisions as members of the UCF community. Plagiarism and cheating contradict these values, and are serious academic offenses. Penalties can include a failing grade in an assignment or in the course, suspension or expulsion from the university, or a "Z Designation" on a student's official transcript indicating academic dishonesty (see <http://z.ucf.edu/>). A student caught cheating will immediately be referred to the UCF Disciplinary Action Committee at the Office of Students Conduct <http://www.osc.sdes.ucf.edu/>.

- Cheating includes but is not limited to:
 - Copying from another student's exam
 - Signing in for another student for an exam
 - Falsifying information such as notes related to absences
 - Using another student's i>clicker remote for them in their absence

Course Accessibility: It is my goal that this class be an accessible and welcoming experience for all. If anyone believes the design of this course poses barriers to effectively participating and/or demonstrating learning in this course, please meet with me (with or without a Student Accessibility Services (SAS) accommodation letter) to discuss reasonable options or adjustments. You may also want to contact SAS <http://sas.sdes.ucf.edu> (Ferrell Commons 185; 407-823-2371) to talk about academic accommodations.

Help & SARC: Please ask for help if you need it! I am here to answer your questions. Additionally, help is available through SARC (Student Academic Resource Center, Howard Phillips Hall, Room 113: 407-823-5130; <http://sarc.sdes.ucf.edu>). SARC provides students with free individual and small-group tutoring for Genetics with Supplemental Instruction (SI). Students can also request a Learning Consultation with a Learning Skills Specialist, or attend Academic Success Workshops to improve study skills & strategies.

UCF Cares: UCF and I care not only about your academic success, but also your overall well-being. Please visit UCFCares.com <http://cares.sdes.ucf.edu> if you are seeking resources or support, or if you are worried about a friend or classmate. Free services and information are included for a variety of student concerns, including but not limited to alcohol use, bias incidents, mental health concerns, and financial challenges. You can also e-mail ucfcares@ucf.edu with questions or for additional assistance. You can reach a UCF Cares staff member Student Care Services, <http://scs.sdes.ucf.edu>, Ferrell Commons 142, between 8 a.m. and 5 p.m. by calling 407-823-5607.

If you are in immediate distress, please call Counseling and Psychological Services (CAPS), Counseling Center 101 <http://caps.sdes.ucf.edu> to speak directly with a counselor 24/7 at 407-823-2811, or call 911.

i>clicker instructions:

You have the option of using the original **i>clicker** remote, the newer **i>clicker+** (ISBN: 1464120153), or the alphanumeric-capable **i>clicker2** remote (ISBN: 1429280476). You may purchase a remote at the UCF Bookstore or online <http://iclicker.com/purchase/>. Instructions are on the back of the remote.

- **Be sure to consider which of your other courses may require an i>clicker or i>clicker2 remote.** I will only ask Multiple Choice questions in class. However, you may need an i>clicker2 remote for answering numeric/alphanumeric questions in another course.

i>CLICKER COURSE REGISTRATION: i>clicker is a response system that allows you to respond to questions I pose during class, and you will receive points for your responses. In order to receive points, you will need to register your i>clicker remote by **SEPT 3, 2015**. You must have come to class at least once and respond to at least one question in order to complete this registration, then you will automatically receive points for your responses. I will upload your i>clicker points to Webcourses daily.

- Register at our **Webcourses** account. Choose the i>clicker link in the left hand toolbar. Follow the instructions to type in your clicker ID (under the barcode on the back).
- It is **NOT** necessary to register your remote at iclicker.com as well. If you register a used remote on their national database, you will be charged a fee.
- Please use the default radio frequency AA to communicate with my receiver.

i>CLICKER POLICIES:

Cheating policy: I consider bringing a fellow student's i>clicker remote to class to be cheating and a violation of UCF's Golden Rule. If you are found with a remote other than your own, or have responses recorded in a class that you did not attend, you will **forfeit all** clicker points and face additional disciplinary action.

Forgotten clicker policy: Note that we will be using i>clicker in almost every class and clicker points will make up 10% of your final grade. Please remember that it is your responsibility to come prepared to participate with a functioning remote every day. However, I do realize that unforeseen circumstances do arise, and for this reason I will drop the **single** lowest i>clicker day from your total participation grade.

Broken/lost clicker policy: If you have lost or broken your i>clicker remote, you will have to purchase another one. Please email me with your new remote ID so that I can manually register your new remote.

Awarding points policy: The i>clicker software has the final say in awarding points. **DO NOT** stop by the lectern, email after class, or come to office hours to ask for points not awarded. If you were in class and using your registered remote properly, you will see a check mark on your remote, and my receiver will record your response. If there is an issue with your remote, you must address it immediately (e.g. re-register, change the batteries, ensure you have the right frequency, etc) if you wish to earn clicker points.

- There are **NO** loaner remotes available.
- There are **NO** alternative methods (e.g. turning in answers written on paper) for recording your responses other than using your i>clicker remote.

Note that the instructor reserves the right to make changes to the syllabus or other aspects of the course at anytime. These changes will be announced in class.

Genetics Lecture Schedule - FALL 2015

Aug 25: Introduction & *Chapter 1*

Aug 27: *Chapter 2* Chromosomes & Cellular Reproduction DROP deadline Thurs, Aug 27 11:59pm
ADD deadline Fri, Aug 28 11:59pm

Sep 01: *Chapter 3* Basic Principles of Heredity

Sep 03: *Chapter 3* continued

Sep 08: *Chapter 4* Sex Determination & Sex-linked Characteristics

Sep 10: *Chapter 4* & *Chapter 5* Extensions & Modifications of Basic Principles

Sep 15: Chapter 5

Sep 17: **Exam 1 (Chapters 1 - 5)**

Sep 22: *Chapter 6* Pedigree Analysis & *Chapter 7* Linkage, Recombination & Gene Mapping

Sep 24: *Chapter 7* continued

Sep 29: *Chapter 8* Chromosome Variation

Oct 01: *Chapter 8* continued & *Chapter 25* Population Genetics

Oct 06: *Chapter 25* continued

Oct 08: **Exam 2 (Chapters 6, 7, 8, 25)**

Oct 13: *Chapter 10* DNA: The Chemical Nature of the Gene

Oct 15: *Chapter 11.1-11.2* Chromosome Structure

Oct 20: *Chapter 12* DNA Replication & Recombination

Oct 22: *Chapter 13* Transcription

Oct 27: *Chapter 13* continued

Oct 29: **Exam 3 (Chapters 10, 11, 12, 13)**

Nov 03: *Chapter 14* RNA Molecules & RNA Processing

Nov 05: *Chapter 15* Genetic Code & Translation

WITHDRAWAL deadline
Mon, Nov 2 11:59pm

Nov 10: *Chapter 16* Control of Gene Expression in Bacteria

Nov 12: *Chapter 17* Control of Gene Expression in Eukaryotes

Nov 17: *Chapter 17* continued & *Chapter 18* Gene Mutations & DNA Repair

Nov 19: *Chapter 18* continued

Nov 24: *Chapter 19* Molecular Genetic Analysis & Biotechnology

Nov 26: Thanksgiving

Dec 01: Chapter 19 continued

Dec 03: **Exam 4 (Chapters 14, 15, 16, 17, 18, 19)**

Dec 15: **Comprehensive Final Exam** (Tuesday 10:00 AM - 12:50 PM)