

Attention!

This is a *representative* syllabus.

The syllabus for the course when you enroll may be **different**.

Use the syllabus provided **by your instructor** for the most up-to-date information. Please refer to your instructor for more information for the specific requirements for a given quarter.

Syllabus

Molecular Genetics 500: General Genetics Winter 2012

Instructor: Gregory C. Booton, PhD **Contact Information:**

Dept. of Molecular Genetics
Office: 388 Aronoff Laboratory
318 W. 12th Ave.

Email: booton.1@osu.edu
Phone: 614-292-4570
Office Hours (Wi12): Mon and Wed: 1-2pm

Lecture Room: Rm 001, Jennings Hall Mon. & Fri. 11:30am-12:48pm

Genetics Learning Centers:

2nd floor, Biological Sciences Pharmacy Library (BPL) in Riffe Laboratory, 496 W 12th Ave.
Open Mon. 1-4pm; Tues. 12-3pm; Weds. 11:00am-4pm; Thurs. 1-5pm; Fri. 9-11am.

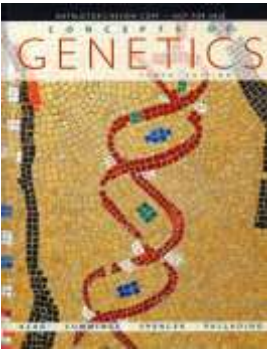
Teaching Associate Contact: TBA (please check the front News page of Carmen)

Course Description

This course will provide students with a robust survey of the principles of genetics, including transmission and molecular genetics, the central dogma, gene expression, biotechnology, and population and quantitative genetics. The mastery of these concepts will provide the core learning objectives of this course. At the end of this course students should

have a thorough understanding of classical and molecular genetic concepts, and of fundamental molecular genetic techniques. Further, the student will have the background, knowledge, and ability to carefully evaluate, interpret, and critically analyze future breakthroughs in molecular genetics and biology.

The text for this offering will be 10th edition of Klug, Cummings, Spencer, Palladino: Concepts of Genetics, AND access to the corresponding Mastering Genetics (see following for options).



Choose ONE of the following three options:

- ISBN 0321732332, bound version of Klug with Mastering Genetics access
- ISBN 0321792173, if you prefer a printed unbound version of Klug with Mastering Genetics access
- Or students can purchase just the Mastering Genetics access directly from Pearson (at www.masteringgenetics.com). Students have the option to buy Mastering alone or with an ebook.

Course Philosophy

The instructors and teaching assistants involved in this course are here to help you achieve a “*real understanding*” of the broad range of genetic concepts explored. We feel that this course format will permit realization of that goal. However, to **actually** achieve that goal will require communication between you and us so that we can identify difficulties in understanding particular material, and then work together to help you overcome those challenges.

Therefore, this course will require a significant level of self-motivation of students to fully utilize the resources of the genetics learning center, including hardware, software, and *human* resources. Students should plan on a **minimum of two hours per week** spent in the MG learning center or on your own computer participating in course activities. We encourage you to take full advantage of this opportunity and look forward to the upcoming quarter.

Carmen

Powerpoint or pdf files of lecture presentations, assigned reading for chapters will be available at the Carmen website before class. Each student enrolled in MG500 will have access to the website for the course, and you should check there for handouts, powerpoint files, and announcements about the course on a regular basis. You are responsible for obtaining the powerpoint handouts **BEFORE** lecture. Handouts will **not** be available in lecture. The lectures move rapidly, based on the assumption that the students have the powerpoint handouts, so please print them out ahead of class time. If you have not used Carmen before please visit <http://telr.osu.edu/carmen-help/students/guide.html> for more information about student usage of Carmen.

Course Structure

The course will usually comprise a combination of 2 lectures per week (Monday & Friday) of 1hr, 18min covering **selected** topics of each of the five core modules and student driven activities, assignments, and evaluations performed via the internet and in a genetics learning center located in the Biological Sciences/ Pharmacy Library.

Office for Disability Services:

If you need an accommodation based on the impact of a disability, you should contact the instructor to arrange an appointment as soon as possible. At the appointment we can discuss the course format, anticipate your needs and explore potential accommodations. We rely on the Office For Disability Services (ODS) for assistance in verifying the need for accommodations and developing accommodation strategies. If you have not previously contacted the ODS, we strongly encourage you to do so as soon as possible. Any student currently registered with the ODS and taking exams at ODS will need to provide the MG500 instructor with the ODS proctor sheets during the first week of class for completion.

Academic Misconduct:

All instructional faculty and staff are required by The Ohio State University to forward all cases of suspected academic misconduct to the Committee on Academic Misconduct. Any form of academic misconduct, no matter how seemingly small, will not be tolerated in this course. Students are expected to abide by the Code of Student Conduct and the university's honor code as outlined in the University Student Handbook or suffer the consequences.

OSU Wireless Access Test

On Friday, January 6th the entire class will meet in the classroom (001 Jennings) at regular class time (11:30am) to test the wireless access capabilities of this room, test student's laptop access to Carmen, test the Respondus Lockdown Browser on your computer, test clicker connections, and further review course structure. This testing will be followed by a course lecture so ALL students should attend. For this test to be successful please do the following before class on Wednesday:

- 1.) Please bring your **FULLY CHARGED** laptop or netbook to class on Friday, January 6th at 11:30am
- 2.) Make sure you have activated your **OSUWIRELESS** username and password
- 3.) Install the Respondus Lockdown Browser onto your computer prior to Friday, January 6th (<https://carmen.osu.edu/shared/LockDown/how2.html>)
- 4.) Purchase (if necessary) and Register Online the Turning Point clicker and bring it to class on January 6th

Course Grading: MG500

<u>Source</u>	<u>Points</u>
1. Module 1-5 Mastering Genetics assignments	50
2. Module 1-4 Exams	360
Module 5 Exam	40
3. Clicker Participation Points	60
4. Final Exam	150
<u>Total Points</u>	<u>660</u>

1. Mastering Genetics (50 points)

We will use the Mastering Genetics website (masteringgenetics.com) for assignments and activities. After you buy your book (or ebook) and get the Mastering Genetics access code, you should spend some time familiarizing yourself with the site and register at the site:

Course ID: BootonMOLGEN500Winter2012

Starting week 1 you will have short textbook specific assignments and activities that you need to complete for course credit. The site will also provide you with additional resources to better understand the course material.

Mastering Genetics module assignments (10 Points each)

- A. Interaction with teaching assistants in learning center to address/resolve difficulties with material.
- B. Complete the Mastering Genetics assignments (masteringgenetics.com) to develop proficiency of module concepts.
- C. Each assignment is due the day before the exam. **If it is not completed by that date and time, those points will be lost permanently.**

DEADLINES WILL BE ENFORCED. IF YOU SUBMIT LATE YOU WILL LOSE ALL POINTS ASSOCIATED WITH THAT ASSIGNMENT.

2. Module Exams (360 points)

If you **DO OWN** a laptop or netbook, you are required to use it for the exams in this course. For those students with their own computer, it is also necessary to install the Respondus Lock-Down browser available at:

<https://carmen.osu.edu/shared/LockDown/how2.html>.

If you need help, please contact the OIT Service Desk: 614-688-HELP (4357) (TDD: 614-688-8743) or email <http://8help.osu.edu/>.

Please remember to FULLY CHARGE your computer before taking any competency exam, as there are insufficient outlets in Jennings 001!

If you **DO NOT OWN** a laptop computer you will need to let the contact TA know as soon as possible so that you can be placed on a list to take the exams in the learning center on an OSU computer. You must notify us from your OSU email account. We are permitted to respond **only** to a written email communication **from your OSU account**.

If you own a laptop, you must take **each** module's competency exam using your own computer in the Jennings 001 classroom. If you have not configured an OSUWIRELESS internet connection, please be sure to do so **prior** to our wireless test on Fri, January 6th. If you need technology help you can consult the BuckeyeBar on the west side of the Thompson main library: (cio.osu.edu/communications/community/2009/buckeyebar_help.html).

If you experience technical problems during the exam, you will be sent to the learning center to complete the exam there.

Module Competency Exams (Modules 1-4, 90 Points each, Module 5, 40 points)

A. All competency exams **MUST** be taken in Jennings 001 or the MG learning center during stated hours. **OSU student ID required for the examination.**

B. **Students who have their own laptop computer will take the exam on the scheduled date and time in Jennings 001. Those who do not have their own laptop will take the exam in the Genetics Learning Center on the same day during learning center hours.**

3. Clicker Participation (60 points)

This course will be incorporating a Student Response or “Clicker” system. Clickers allow instructors to ask questions and gather students' responses during a lecture. The Ohio State University has standardized on clicker devices and supporting software from Turning Technologies, LLC to ensure that the OSU community receives a quality product and that students won't need to purchase multiple clicker devices for different courses. You will need to purchase (new or used) a Turning Point clicker device that is available from university area bookstores. Instructions on how to register your clicker for this course are found on the front “news” page of Carmen for MG500. After registration of your clicker we will test your clicker device's communication with the course computer during the wireless testing session on Friday, January 6th. For the first two lectures I



will post on Carmen a list of those clickers that are communicating with my computer. It is each student's responsibility to check this list and make sure that your clicker is communicating correctly with my computer, and if not to let me know. I am planning on incorporating some clicker questions during each lecture. **Clicker responses will constitute the participation portion of your grade in this course, which is a total of 60 points.** You will be awarded participation points regardless of whether your answer is correct or incorrect. I plan on incorporating the clicker system as a learning tool so that you may better understand the material, and not as a test of specific knowledge. Your final participation points will be based on the percentage of responses to clicker questions. For example, if you responded to 80% of the clicker questions you would receive: $0.80 \times 60 = 48$ participation points for the course.

4. Comprehensive Final Exam (150 Points)

Computer based final exam covering material from the entire course (5 core modules).

Student Directed Bonus Module

Forty bonus points will be available to students in MG500: bonus module details will be discussed during lecture.

MG500 Lecture Schedule Winter 2012

<u>Date</u>	<u>Module</u>	<u>Week</u>
Wed., Jan 4	Introduction/ Module 1	1
Fri., Jan 6	WiFi/ clicker test (in lecture room)	1
Mon., Jan 9	Module 1	1
Wed., Jan 11	Module 1	2
Fri., Jan 13	Module 1	2
Mon., Jan 16	MLK HOLIDAY/NO CLASS	3
Weds., Jan 18	Competency Exam 1	3
Fri., Jan 20	Module 2	3
Mon., Jan 23	Module 2	4
Fri., Jan 27	Module 2	4
Mon., Jan 30	Module 2	5
Weds., Feb 1	Competency Exam 2	5
Fri., Feb 3	Module 3	5
Mon., Feb 6	Module 3	6
Fri., Feb 10	Module 3	6
Mon., Feb 13	Module 3	7
Weds., Feb 15	Competency Exam 3	7
Fri., Feb 17	Module 4	7
Mon., Feb 20	Module 4	8
Fri., Feb 24	Module 4	8
Mon., Feb 27	Module 4	9
Weds., Feb 29	Competency Exam 4	9
Fri., Mar 2	Module 5	9
Mon., Mar 5	Module 5	10
Weds., Mar 7	Competency Exam 5	10
Fri., Mar 9	Wrap up / Review	10
Mon., Mar 12	Final Exam: 11:30-1:18pm	11

Grade Scale : based on % of 660 total points

<u>95 – 100: A</u>
<u>90 -< 95: A-</u>
<u>85 -< 90: B+</u>
<u>80 -< 85: B</u>
<u>75 -< 80: B-</u>
<u>70 -< 75: C+</u>
<u>65 -< 70: C</u>
<u>60 -< 65: C-</u>
<u>55 -< 60: D</u>
<u>< 55: E</u>

Exam schedule and Mastering Genetics assignment deadlines

This course requires and expects a significant level of individual responsibility on the students' part to assure that they are keeping up with the requirements of the course, e.g., reading textbook chapters, completing Mastering Genetics assignments (masteringgenetics.com), practicing self-evaluation quizzes, and taking competency exams. That said, following is a list of important exam dates and assignment deadlines.

Module	Exam	Date & Time
One One	Mastering Genetics assignment Exam	5pm, Jan 17 th 11:30am, Jan 18 th
Two Two	Mastering Genetics assignment Exam	5pm, Jan 31 st 11:30am, Feb 1 st
Three Three	Mastering Genetics assignment Exam	5 pm, Feb. 14 th 11:30am, Feb. 15 th
Four Four	Mastering Genetics assignment Exam	5pm, Feb. 28 th 11:30am, Feb.29 th
Five Five	Mastering Genetics assignment Exam	5pm, Mar. 6 th 11:30am, Mar. 7 th
Final Exam	Modules 1 through 5	11:30am-1:18pm Mon, Mar. 12 th