

MCB184 Syllabus S12

I> Course description and goals

- A] Biology 184 is a 4 unit combined (lecture + lab) course designed to accomplish the same goals as (MCB181R + MCB181L)
- B] A 5-unit Honors version is available
- C] The primary focus of the course is **how things work** and why they work that way. Specific topics include the scientific approach, the nature of the molecular world and the structure and function of key macromolecules, control of genes and proteins, copying and distribution of the genetic material, movements of and within the cell, communication within the cell and with the cell's environment, detection of macromolecules and their state, capture, storage and release of energy
- D] Delivery will be through a variety of techniques, often starting with an activity to get you thinking about a problem the cell must solve or the nature of likely solutions. The course will also emphasize relationships between previously covered materials and new topics
- E] As the course progresses, you should be able to explain the key concepts & components to a non-scientist
- F] Basic mathematics and chemistry knowledge is assumed.

II> Lab Administration (People)

A] Bruce Patterson Instructor/Lab Director patterso@u.arizona.edu

Office Hours: Mon. 11-11:50 Life Sciences South 440

After class M, F 4-4:30 anytime the classroom is available; outside the door if not

1] Office hours: two per week; TBA

B] Asya Roberts Administrator BSE109 621-9267 asya@email.arizona.edu

Hours: Mon & Thu 9:30-12:30 Tue, Wed, Fri by appt.

e-mail Asya *as soon as possible* regarding absences; before they occur is best

C] Individual lab sections will be taught by different Lab Instructors; details on course website

1] Lab instructors will have 1 office hour /week and be able to answer questions from lecture

III> Assignments and Grading Policy (see also cheating; absences and late work)

A] Assignment relative values:

All assignments of a given type will be averaged together and then incorporated into a final grade as follows:

Bi-weekly (approximately) in-class 'Big checks': 36% (6?)

'Little checks' (Anytime in-class quizzes & activities)+ online assessments (0-2/week) 8%

In-Lab Quizzes: 8% (~1/week)

Lab associated assignments (LABAs): ~1/week; total 25% (all equally weighted)

Fermentation Lab report: 2%

Wavelengths Lab Report: 3%

Semester lab project: 6% (proposal 2%; project 4%)

Final exam: 12%

B] 'Big check' dates & info (subject to change with notice)

1] Most of these will be scheduled on Wed.; the exception is Mar. 9

2] Jan. 25, Feb.8, Feb. 22, Mar. 9, Apr. 4, Apr 18

3] Final exam:

4] 'Exam reviews' are every day in class, any day with your notes & office hours. There won't be course-sanctioned cram sessions 24 hours before Big Checks.

C] Comment on grade inflation

1] Average or 'sufficient' work will not generate a score of 100

2] For in-class exercises and some on-line work, perfectly executing the minimum requirement will yield 95 or less. A 100 will be attainable by any dedicated student, but will often require extra insight, effort, etc.

D] On-line homeworks should be done *on your own*. Unless your instructor indicates otherwise, on-line work is open book and open-web. Prior to doing an assignment, principles or basic understandings may be freely discussed; demo problems can be jointly worked on, but any work for which you receive an individual score should be executed on your own unless explicitly indicated otherwise.

E] Group work

- 1] A number of assignments in and out of class will be group work in which all group members are expected to actively contribute
- 2] A single grade will be given to all group members; each is responsible for the timely submission and quality of the final product
- 3] Individual members may be asked to assess contributions of their fellows; if there is a consensus that a member did not contribute equally, their score may be lowered to reflect this

F] Lab-associated assignments

- 1] Homework assignments will generally be due the week after they are assigned; some may be completed in class. These will be graded on completeness, clarity, succinctness, and comprehension of the material. Rubrics will be provided.
- 2] These assignments will include tasks, such as solving a problem, written work, and combinations.
- 3] In general, all assignments will be due at the start of class though another time may be posted/announced.

G] Grade cutoffs will be: A \geq 90.0%; B \geq 80.0%; C \geq 70.0%; D \geq 60.0%

H] Extra credit, curving, bonus points, etc.

- 1] No, none of the above
- 2] I *will* make an adjustment to exams based on the difference between the top 3 scores and 100%. If the average of the top 3 scores is 98, all students will receive 2 points. Only under exceptional circumstances will more than 5 points be added to scores, and I may at any time hold the cap to 3 points.
- 3] There will also be an opportunity to submit potential exam questions. If unique, correctly answered, and used, up to 1 point per exam will be recognized. Questions must be submitted prior to the week-end preceding the exam.

I] Re-grade Policy

You may return assignments for a re-grade within one week of having them returned to you. Re-grade requests must be accompanied by a typed clarification of what was overlooked or in error the first time. Your instructor will re-examine the entire work, not just the area in question. The purpose of re-grades is to correct errors in your instructor's understanding or scoring of your work, not to debate scoring policies. Note that a regrade constitutes new work on your part; an egregious mis-understanding demonstrated in your regrade request may cost you additional points. You also have 1 week to contest the correctness of a posted score.

J] Ignorance of the existence of an assignment is no excuse. Even with an excused absence, it is your responsibility to be caught up as soon as possible. This may require you to make contact with your instructor instead of waiting until your next lab section.

K] We reserve the right to adjust your scores upward based on exceptional participation and/or mastery of the course material as judged by your instructor.

IV> Required Resources

A] Textbook (Scott Freeman's [Biological Science](#), 4th ed.), companion website [Mastering Biology](#)

B] Biology 184 lab manual and the Course website: <http://blc.arizona.edu/courses/mcb184>

C] Essential software will be available from the course website for download and use on most modern, internet-connected Mac or Windows systems. You can access this material on newer computers in the Koffler 209 and in most cases, the Science Library and Main Library.

V> Video lectures

A] Bruce will make every effort to have each lecture available in both video format and as a .pdf file including his presentation notes. However, these resources are not guaranteed

B] Supplemental material and lecture continuations (material that did not fit into the 50-minute format) may also be included. In all cases, these will be accompanied by text + image versions.

VI> Absences and late work

A] Classroom attendance is not required, however some graded work will be done in-class

1] It is my intention to announce graded activities in advance of class

2] There are better places to watch porn or update your Facebook account; see the 'Lab/Classroom Rules' section for all the actions that can get you kicked out of the course.

B] Laboratory attendance is required

- 1] Arrival more than 10 minutes late without a formal excuse constitutes missing the lab; individual instructors may have additional policies
- 2] Late arrivals are not entitled to take in-lab quizzes
- 3] Leaving before lab exercises and discussions are complete constitutes missing the lab
- 4] All holidays or special events observed by organized religions will be honored for those students who show affiliation with that particular religion

C] There will be many graded in-class exercises. If you're not there, you get a zero.

D] **Absences** will be excused for exceptional and verifiable reasons only. Arrangements should be made well in advance. When feasible, excused absences are made-up by attending another section; this requires formal approval from the lab administrator in BSE 109. Failure to make up the lab will result in zero points for all assignments associated with the lab. Missing a "Big Check" will require a make-up within 1 week of your return or will be substituted with the corresponding score from the relevant portion of the Final at the discretion of Dr. Patterson.

- 1] Where possible, we will arrange for you to attend a lab for which you have an unexcused absence in order for you to keep up and master the material
- 2] Failing to contact Ms. Asya Roberts (see Lab Administration) within 48 hours of your return to campus will constitute an unexcused absence; failing to make a reasonable effort by e-mail BEFORE this time may also be judged an unexcused absence

E] **Lab assignments handed in late** (except due to an excused absence)

- 1] Your instructor may not accept late assignments at all, i.e. zero credit for assignments not handed in on time
- 2] If accepted, are subject to a 50% credit deduction; this penalty is assessed prior to grading. It is your responsibility to ensure that your instructor receives any work that is not handed in during class.
- 3] Assignments will not be accepted for credit after those of your classmates have been returned to them

F] If you miss and fail to attend make ups for more than two labs, (excused or not) you will be dropped from the course or given a failing grade. Even labs made up in another section may trigger this policy

VII> Honors

A] A 5-credit version of the course will be available for honors credit. It will be the same as the course described here, excepting there will be an additional 1-hour weekly meeting. There will be separate assignments arising from that meeting dealing with scientific problem solving and analysis of science in both formal scientific literature and public media. Grades from the Honors component will be weighted as 20% of the final grade; the grade from the lecture+lab component will count as 80%.

B] An Honors-specific syllabus is linked from the course homepage

VIII> Academic Integrity

A] **General:** Integrity is expected of every student in all academic work. The guiding principle of academic integrity is that a student's submitted work must be the student's own. This principle is furthered by the Student Code of Conduct and disciplinary procedures established by ABOR Policies 5-308 - 5-403, all provisions of which apply to all University of Arizona students. For further information, please see: <http://deanofstudents.arizona.edu/codeofacademicintegrity>.

B] Cheating/Plagiarism is an extremely serious matter and will be treated as such. Please note that possible responses to even a first instance of plagiarism include an 'E' for the course or expulsion from the university.

- 1] See the contract in your lab manual for some guidance.

C] Reports that are highly similar or that lack proper credit for sources of information, will be considered as cases of cheating and/or plagiarism. We strictly adhere to the University's Code of Academic Integrity and Code of Student Conduct as presented in the University catalog and the Student Handbook (<http://deanofstudents.arizona.edu/codeofacademicintegrity>). Therefore, any case of cheating or plagiarism will, at the very least, receive zero points for that assignment, and could result in your expulsion from the university. If you have any questions regarding how to properly cite a source for a scientific paper, resolve them with your instructor before you hand the assignment in.

D] Lying about submission of electronic work will result in a loss of credit for that work and potentially submission of appropriate Honor Code violation paperwork

E] Turnitin.com

- 1] If you decide to take and continue in this course, your written submissions will be filtered through a plagiarism-prevention program called TurnItIn.com. You should note that TurnItIn.com – always without your name and any personal information – will retain your paper as part of their database so that students who plagiarize your work can be detected. Because of this program, you will not have to compete with students who commit undetected plagiarism. Anyone who has questions or problems with TurnItIn.com may talk privately about these with the instructor.

IX> Lab/Classroom Rules

A] Read the introductory sections of the Lab Manual and adhere to those rules. No food or drink is allowed in the lab. We cannot risk contaminating the lab materials, or worse yet, contaminating you! Points may be taken off the week's quiz or homework for failure to observe reasonable clean-up behavior. Do your share in keeping the common areas of the lab clean as well.

B] Lab Safety

These labs have been developed to minimize dangers posed to students. However, we occasionally use equipment or reagents that can cause injury, and accidents sometimes happen. Report any injury to the prep-room staff or your instructor immediately! Showers, eyewashes, fire extinguishers, and first-aid kits are present in case of an emergency. Closely follow your instructor's instructions in the use of dangerous equipment, and in the disposal of all reagents and supplies.

C] Decorum/Disruptive behavior

The lecturer or Lab Instructor is the authority in the room. Simple courtesy is expected of everyone in the room--there's never cause to yell or interrupt your peers or your instructor. Phones, mp3 players, etc. should be turned off throughout. During your lab instructor's (and peer's) presentations, you're expected to listen attentively unless called on or participating in discussion. Computers are present in the labs for specific exercises which don't include checking e-mail, downloading the study guide for another course, or viewing human anatomy.

Disruptive behavior is anything that interferes with the teaching/learning environment. Examples from the <http://deanofstudents.arizona.edu/examplesofdisruptivebehavior> include:

- Being persistently tardy or leaves early
- Talking incessantly during a presentation
- Loudly and frequently interrupting the flow of class with (inappropriate) questions or interjections
- Belligerence when confronted regarding inappropriate behavior in class
- Cell phones ringing in a classroom, text messaging, chatting online
- Persistent and unreasonable demands for time and attention in or out of the classroom

Also: Lying about times electronic work was initiated or completed

Any of these actions may lead to your being administratively dropped from the course for the first offense

- 1] While you're in the lab, texting, e-mailing and phoning are not appropriate. If something of overriding consequence comes up, excuse yourself and move to the hallway
- 2] Engaging in non-lab related activities (social or academically related to other courses) may result in partial or complete loss of credit for the ongoing lab activity and you may be administratively dropped from the course.

X> Policy Regarding Threatening Behavior

<http://policy.web.arizona.edu/~policy/threaten.shtml>.

XI> Special Accommodations/Students with disabilities

A] If you anticipate barriers related to the format or requirements of this course, please meet with Bruce and your Lab Instructor so that we can discuss ways to ensure your full participation in the course. If you determine that disability-related accommodations are necessary, please register with Disability Resources (621-3268; drc.arizona.edu) and notify me of your eligibility for reasonable accommodations.

XII> Challenging topics

A] This course will deal with the topic of biological evolution. This underlying principle is the foundation for the understanding of biology. It is critical for biologists, health care workers and an informed citizenry to understand what evolutionary biology does and does not say about current and historical life on earth. Evidence supporting the theory of evolution, as well as understanding of its explanatory power will be assessed.

B] We will discuss a number of genetic diseases and mutations that may affect students or their families and friends

XIII> Alterations to this syllabus may be made if deemed necessary. Advance notice will be clearly provided to all students attending lecture and an on-line notification will be made as well.