

Organismal Biology Biology 101A and B Winter 2009



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(*Arabidopsis*.....model plant used in cellular, molecular and physiological research)

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Office hours: MWF 11:00 – 12:00 (11:45 on Wed) or by appointment

Class Meetings: Section A: MWF 8:00-9:20am Carnegie 204
Section B: MWF 9:30-10:50am Carnegie 204

We will usually meet for 60 minutes each scheduled class day but occasionally we will take the full 80 minutes. You will have 80 minutes for both in-class exams. The class meetings will be very interactive; hence I don't call them lectures. You must do the assigned reading for each day BEFORE coming to class. The HITT response remotes will help me to assess your progress as we discuss the course content. Cell phones **MUST** be turned off during all class activities (lecture and lab). Students whose extracurricular commitments conflict with class meeting times should understand that missing class may (and often does) impact negatively on grades.

Labs: W Th, F 1:05-4:00 or Th 8:00-10:50 Carnegie 4th floor

You will be assigned a lab room/instructor on your first day of lab. Always bring your lab manual, a calculator, and a pencil to lab! Emergency lab section switches require prior notification to instructors.

Additional Staff for course:

Assistants in Instruction: Greg Anderson (Lab Ogre) x 6110
Carolyn Lawson x6048

Writing Workshop: Seri Rudolph, Learning Associate x 6374

Mathematics & Statistics Workshop: Grace Coulombe, Learning Associate x8374

TAs and TWAs: TBA

The Technical Writing Assistants (TWA) are specially trained scientific writing peer tutors and will be very helpful for beginning to learn the process of scientific paper format presentation.

Teaching Assistants (TAs) will be present in each lab section and are there to assist you in understanding and competing the work involved in each lab experience.

PALGs: Hannah Mack hmack@bates.edu and Brooks Motley hmotley@bates.edu

We will describe the PALG (Peer Assisted Learning Groups) system in our first class meeting. Previous generations of Bio 101 students have found that regular attendance at PALG meetings has been VERY helpful. PALG hours will be announced in class

- Books:** 1) Biology Concepts & Connections 5th ed. Campbell, Reece, Taylor, and Simon (The accompanying CD is optional and won't be used formally)
4 copies on 2 hour reserve at Ladd
6th edition is ok to use
- 2) Biology 101 Lab Manual (offset)
- 3) HITT remote

Course EMAIL lists and resources: We will use LYCEUM. You can reach Lyceum from the hot list on the Bates College opening web page. All class handouts can be downloaded and printed from Lyceum.

Course Philosophy

Bates has a three course required sequence for Biology majors. Bio 101 is the first of these three courses and is followed by Bio 242, Cell & Molecular Biology which is normally taken in the Fall of the sophomore year, and Bio 270, Ecology, which is normally taken in the Winter of the sophomore year. Students with strong AP or IB backgrounds can "place out of" Bio 101 after discussing this with a 101 instructor (me!) and receiving the signature of the Dept Chair, Dr. Kleckner. We do not recommend that first year students accelerate to take Ecology. Students who "opt out of" Bio 101 will still be required to complete 10 courses in Biology for the major.

Course Structure and Grading

Exams: There will be two in-class exams and a semi-cumulative final. Each will be worth **18%** of your course grade for a total of **54%** of your grade. Your exam scores must be at a passing level ($\geq 55\%$) in order to pass the course, regardless of the other work in the course. Students scoring below 55% on either of the first two exams will be brought in for an individual conference and offered additional group help sessions with me to improve future exam performance. The exams will be held **Feb 4** and **Mar 11**. The third exam, held during finals week, will emphasize material since exam #2 but will also cover integrating topics from the whole course.

101 Finals: Section A Th April 16 @ 8:00 am Section B Tu April 14 @ 10:30 am

Students will sign an Honor Statement with each exam pledging that they have neither received nor given information about the exam content to/from any other student.

Diversity Project: We will do this in lab working in groups of two or three and the project will be worth **8%** of your grade. Each group will study a specific group of organisms and present their information to the class during lab in the 7th week of the semester (after Winter recess). Details will be in the lab manual.

Lab: will consist of observations, development of basic research and statistical skills, and experimental work. Written work, as detailed in the lab manual, will frequently be submitted for evaluation. Attendance is required. Reports and lab participation will be worth **33%** of your grade.

HITT remotes (aka 'clickers'): In order to make class meetings as interactive as possible I will pose questions to the class and ask you to respond electronically, usually after a period of interacting with your neighbors discussing the question. I expect to do this 3-5 times/class meeting. Some of the questions will be factual recall based on the reading for that day but most will be integrative questions, to allow both you and me to see how well the material is being understood. Each of you should purchase from the book store an HITT remote and bring it to class each day (and ensure that the batteries function!) When a question is asked, you will have time to consult your neighbors and respond electronically (vote). Correct answers will receive 3 points, incorrect answers will receive 2 points and no answer (non-attendance or you forgot your clicker or it doesn't work) will receive 0 points. I will "forgive" each student missing TWO class meetings...excused or unexcused when calculating your clicker grade to equal the final **5%** of your course grade. The system thus emphasizes coming to class prepared by doing the reading and coming to class! Students found using more than one clicker in a class session will be referred to the Student Conduct Committee. When you buy an HITT remote, please send me an EMAIL containing the following information:

To: jpellicc@bates.edu

Subject: h-itt:register (must be spelled exactly like this)

In the body of the text include (each item on a separate line with NO additional text in the body of the EMAIL or on any line

- Name: your first name and last name (ex Jane Doe)
- StudentID: (ex. 0000123456)
- RemoteID: (6 digits...can be found underneath the battery)
- ScreenName: (ex. Joe) This will show up on the screen when you use the remote so that you know your response is being counted and that you have registered your remote for this class.
- ClassID: (A or B)

so, an example email would read..... (with my EMAIL address jpellicc@bates.edu substituted for instructor@college.edu)



Grading:

The course will NOT be graded on a curve. Thus, you are NOT in competition with other students. I encourage you to work cooperatively on all course activities. You can know your status in the course at any time by using the following guideline:

Grades will be assigned as follows:

- ≥ 90% = some kind of A
- ≥ 80% = some kind of B
- ≥ 70% = some kind of C
- ≥ 55% = some kind of D
- < 54% = F

Thus, if after 1 exam and the diversity project, you've received 73% of the possible points, you're in the low C range. Again, you must average 55% or better on your three exams to pass the course, regardless of your total score for the course.

PALG and Review Sessions:

PALG will be scheduled twice a week, usually in the evenings. The PALG instructors will announce when their sessions will begin. Starting Week #2, I will hold group review sessions twice a week...Monday and Thursday from 3-5 pm. These are designed so that Winter athletes can attend the first hour. Attendance at PALG and Review sessions is optional but is strongly encouraged.

Class Schedule & Readings W 2009

<u>Week</u>	<u>Dates</u>	<u>Topic</u>	<u>Reading</u>
1	Jan 12 Jan 14	Course structure and Introduction Species & Classification	Chapter 1 Ch 14: 279-285 Ch 15: 304-311 Ch 16: 314-322, 332-334
	Jan 16	Origin of life Prokaryotes and protists	
2	Jan 19 Jan 21 Jan 23	No class MLK celebration Plants & Fungi Animal Diversity	Ch 17 342-348, 357-363 Ch 18 366-381, 393
3	Jan 26 Jan 28 Jan 30	Statistics (guest lecture Grace Coloumbe) Fick's Law/Diffusion Animal Structure and Function Nutrition & Digestion	Ch 5 81-82 Ch 20 Ch 21 428-445
4	Feb 2 Feb 4 Feb 6	FIRST SEMESTER EXAM Gas exchange	Ch 22
5	Feb 9 Feb 11 Feb 13	Circulation	Ch 23
WINTER RECESS			
6	Feb 23 Feb 25 Feb 27	Cell Reproduction Immune System	Ch 8 124-132, 136-144 Ch 24 484-491, 498-501
7	Mar 2 Mar 4 Mar 6	Scientific Writing (guest lecture Seri Rudolph) Development	Ch 27
8	Mar 9 Mar 11	SECOND SEMESTER EXAM	
	Mar 13	Plant structure	Ch 31, Ch 17 348-355
9	Mar 16 Mar 18 Mar 20	Plant nutrition & transport	Ch 32
10	Mar 23 Mar 25 Mar 27	Plant control systems Photosynthesis	Ch 33 Ch 7
11	Mar 30 Apr 1 Apr 3	Homeostasis	Ch 25
12	Apr 6 Apr 8 Apr 10	Chemical regulation Wrap up/Review	Ch 26 + 544-545