

BSC-2011-01 Syllabus

BSC 2011 - Section 01 –Biological Science II – Spring 2008

Lecture: MWF 9:05-9:55, 228 CON

Biology help center: Conradi 339

Course web site: <http://bio.fsu.edu/~binouye/bsc2011.html>

Instructor: Brian Inouye

Tutor: Tyler Hawkins

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Phone: 644-5605

Office: 305 Conradi

Office hours: W 1:30-2:30; Th 3:00-4:00

Study Center Hours: tba

Textbook: Biology Campbell and Reece

Readings are to help you understand lectures. Keep in mind that they may present more detail or a different perspective than was presented in lecture. You will be tested only on material from the lectures and genetics problems/lab, so use the book for reference, not as a study guide.

Attendance:

You are strongly encouraged to come to lectures, although you will not be graded on daily attendance. Please treat lectures as a participatory activity. Try not to distract the rest of the group by coming late, reading, talking, etc. Any changes to the schedule for exams, quizzes, etc will be announced in lecture. If you miss lecture it is your responsibility to find out about any changes from other students and/or the website.

Help Sessions:

You are **not** required to attend help sessions. Help sessions are opportunities for you to talk with me and other students about course material. Help sessions will be run as discussions, not as repeats of lecture. Come prepared with questions about lectures, or about how the material in lecture relates to issues outside of class. For example, you might come because you didn't understand the part in lecture about gastrulation, or because you read something interesting about human cloning in the paper and think that it relates to what we've discussed in lecture. Come to help sessions on time (or let us know if you must come late). If no one has arrived by 5 minutes after the scheduled time the session will be cancelled.

Office Hours and tutoring:

Please do come to my office hours, or use the biology tutoring center, to discuss your questions about course material or biology in general. Please bring the most specific questions you can to office hours and tutoring. If you take the time to try to narrow down what you want to know, you will get more useful answers. If you can't make office hours, email for an appointment.

Grading:

Your grade will be based on 640 possible points. The distribution of points is listed below. This class is not intended to weed out students. Final grades may be curved, but only in your favor. If the median grade in the class is 80% or greater, I will assign final grades on a “10-point scale”. Everyone between 90 and 100% will get an A or A-, 80-89% will get a B or B-, etc. If everyone in the course gets over 90%, everyone will get an A. **If the median grade is below 80%, I will use the median as the dividing line between a C+ and a B-.** This means that I will not know the final criteria for assigning grades until *after the final is graded*, however a minimum of 50% of the class will receive an A or a B.

Assignment	Points
Exam 1	100
Exam 2	100
Exam 3	100
Final Exam:	
Last unit of lectures	100
Comprehensive	100
Quizzes (1-4)	20/quiz = 80 total
Genetics problem set	15
Population dynamics computer lab	15
Minute assessments (several over semester)	20
Participation	10

Exams:

The four unit examinations and the scheduled final examination must be taken at the scheduled date and time. **No** exams will be available before the scheduled date and time. Make-up examinations **may be** offered for an excused absence approved in advance, or for verifiable personal emergency or incapacitating illness. If a make-up is not offered, you will be assigned a grade for that examination equal to the average of your other four examinations in the course. Students who miss a scheduled examination without prior approval or verifiable emergency will be assigned a grade of zero.

Quizzes:

Students who miss a scheduled quiz with prior approval or verifiable emergency will be assigned a grade based on the average of their other three quizzes; there will be no make-up quizzes. Students who miss a scheduled quiz with no prior approval or verifiable emergency will be assigned a grade of zero for that quiz.

Genetics problems and computer lab:

The genetics problem set and computer labs will be due on the date shown on the syllabus, and completed via the web on blackboard. Assignments submitted late will lose points every day.

Minute assessments:

At the end of some lectures I will set aside time for you to write a brief response to questions that will help you (and me) assess how well you understand lectures. You will not be graded on the content of these assessments, but you will get points just for turning them in. Assessments might be questions such as “what do you think was the most important point from today’s lecture?” or “list one or two questions you have about material in today’s lecture?”. If you are absent on the day of a minute assessment you will get a score of 0 for that question.

Participation:

These points are based on whether you participate in discussions, ask questions, help other students, and have a good attitude.

Outlines:

Before each lecture I will post an outline of the lecture on the course website. If you print this out and bring it to class it may help you take notes. The outline should help you to follow the lecture and make sure you aren’t missing any important points. NOTE that the outline will not be a complete transcript of the lecture. You are expected to take your own notes to fill in the outline. Some people prefer to fill in their outlines after class, as a way to study.

Course goals:

The goals for this course are for you to improve your ability to do the following things by the end of the semester:

1. describe the basics of the current state of knowledge in the areas of developmental biology, genetics, evolutionary and behavioral biology, and population and ecosystems ecology.
2. understand that science is a process, so our knowledge is subject to change
3. be able to construct and read graphs that summarize data or scientific ideas.
4. evaluate biological information provided in the media, and make better informed decisions about biologically related political issues.
5. enjoy and ask questions about the natural world.

Suggestions for doing well in this course:

- Attend lectures and take notes.
- Use readings to supplement lectures, NOT replace them.
- Ask questions when you have them. You can ask questions in class, in the tutoring session or office hours, in help sessions, or in conversation with other students.
- Study in groups. Talking about concepts is a great way to learn.
- Focus on understanding processes, not definitions of individual words. Make sure you understand graphs and other figures, since they summarize a lot of information.
- Most important, be curious! Consider how what we discuss one week relates to

lectures three weeks ago, or relates to issues outside of class. Thinking about what you are learning and how it relates to other contexts will help you remember new ideas.

ADA Policy:

Students with disabilities needing academic accommodation should: (1) register with and provide documentation to the Student Disability Resource Center; and (2) bring a letter to me indicating the need for accommodation and what type. This should be done during the first week of class.

Honor Code:

Students are expected to understand and to uphold the Academic Honor Code published in the *Florida State University General Bulletin* and in the *Student Handbook*. The academic honor system of Florida State University is based on the premise that each student has the responsibility:

1. To uphold the highest standards of academic integrity in the student's own work.
2. To refuse to tolerate violations of academic integrity in the University community.
3. To foster a high sense of integrity and social responsibility on the part of the University community.

*A student violating the Honor Code in any assignment, quiz, or examination in BSC 2011 will receive a **minimum** penalty of a zero (0) for that exam, quiz or assignment.*

Date	Topic	Assignments due	Readings	Points
Unit I: Going from genes to an organism: Gene Regulation and Development				
1/7	1. Introductions, syllabus, philosophy of science, etc.		Ch. 1 (skim), Ch. 17	
1/9	2. Review of gene expression		Review Ch. 5, Ch. 16, Ch. 17	
1/11	3. Development: Differentiation and gene regulation		pp. 362-368, Ch. 21- 21.3	
1/14	4. Development: gene regulation in eukaryotes		Ch. 47	
1/16	5. Development: fertilization and cleavage		Ch. 47	
1/18	6. Development: gastrulation	Quiz 1	Ch. 47	20
1/21	MLK, Jr. Holiday-No Classes			
1/23	7. Development: organogenesis		pp. 197-199, 955-960	
1/25	8. Development: internal and external environment		Ch. 47, 21	
1/28	9. Cell cycle		Ch. 12	
1/30	EXAM Unit I	Exam I		100
Unit II: Passing genes from one organism to another: inheritance and the relationship between genotype and phenotype				
2/1	10. Cell division 1: mitosis		Ch. 12	
2/4	11. Cell division 2: meiosis and genetic variation		Ch. 13	
2/6	12. Mendelian genetics: single traits		Ch. 14	
2/8	13. Mendelian genetics: multiple traits		Ch. 14	
2/11	14. Non-Mendelian genetics: dominance, pleiotropy	Quiz 2	Ch. 15	20
2/13	15. Non-Mendelian genetics: additivity, genotype to phenotype, sex chromosomes, sex determination		Ch. 14-15	
2/15	16. Linkage, crossing over, mapping		Ch. 15	
2/18	17. Mutation		Ch. 17	
2/20	18. Introduction to evolution and natural selection	Genetics problems due	Ch. 22	15
2/22	EXAM Unit II	Exam II	Ch. 23	100

Unit III: Genes in populations: Population genetics and evolution				
2/25	19. Population genetics, Hardy-Weinberg Equilibrium		Ch. 23	
2/27	20. Exceptions to H-W		Ch 23	
2/29	21. More Exceptions to H-W		Ch. 23	
3/3	22. Fitness and types of selection	Quiz 3	Ch. 22, 23	20
3/5	23. Natural selection discussion		Ch. 24	
3/7	24. Sexual selection and coevolution		Ch. 24	
3/10-14	Spring break, no classes			
3/17	25. Variation within populations		Ch. 24	
3/19	26. Evidence of evolution		Ch. 25	
3/21	27. Variation among populations			
3/24	EXAM Unit III	Exam III		100
UNIT IV: Organisms in populations, communities and ecosystems: Behavior, ecology, & the biosphere				
3/26	28. Speciation		Ch. 25	
3/28	29. Behavior		Ch. 51, pp. 1092-1095	
3/31	30. Ecology and life history		Ch. 52	
4/2	31. Population dynamics		Ch. 52	
4/4	32. More population dynamics		Ch. 52	
4/7	33. Human dynamics, competition	Quiz 4	Ch. 53	20
4/9	34. Predation		Ch. 53	
4/11	35. Mutualism and trophic structure		Ch. 53	
4/14	36. Top predators	Computer lab	pp. 1166	15
4/16	37. Maintenance of diversity, succession, ecosystems		Ch. 54	
4/18	38. Conservation biology		Ch. 55	
4/25	FINAL EXAM 7:30 – 9:30, 228 CON	Final		200
4/29	Final grades entered by this day			

This document and all others produced for this course are available upon request in alternate formats for individuals with print-related disabilities. Contact Dr. Inouye for more information.