Course Information and Syllabus
Bi328: Developmental Biology
Winter 2013

Course Goals
Developmental biology as a whole is dependent on the synthesis of many different disciplines, including cell biology, anatomy and physiology, genetics, molecular biology, and evolutionary biology. In this course, we will explore a number of aspects of developmental biology, focusing mainly on cell biology and genetics. The course is divided into three topics - we will begin with an overview of developmental processes, then go deeper into the underlying genetics, and finally explore a number of fascinating topics in the field of developmental biology. We will discuss the different model organisms used to investigate different topics in development, and have a hands-on look at some developmental processes in the lab portion of the class.

During this course, you will learn about the mechanisms and processes that occur during animal development. We will also discuss how scientists come to the conclusions they do, and think about how experiments are designed to test the hypotheses and questions in the field of developmental biology.

Because scientific research on the topics covered by this course is expanding nearly every day, the lectures and reading materials in the syllabus are designated as tentative. If new research arises related to the course topics, one or more of the lectures and associated readings may be changed to incorporate the new material.

Course Overview

*Topic I: Overview of Development*
- Lecture 1: Principles of Development
- Lecture 2: Cell Signaling & Cell Fate Specification
- Lecture 3: Fertilization & Cleavage
- Lecture 4: Gastrulation
- Lecture 5: Axis Formation I
- Lecture 6: Axis Formation II

*Topic II: Developmental Genetics*
- Lecture 7: Principles of Developmental Genetics
- Lecture 8: Early Development of *Drosophila*
- Lecture 9: The Genetics of Embryogenesis
- Lecture 10: Somitogenesis
- Lecture 11: Neural Tube
- Lecture 12: Neural Crest

*Topic III: Topics in Developmental Biology*
- Lecture 13: Organogenesis
- Lecture 14: Limb Development
- Lecture 15: Developmental Neurobiology
- Lecture 16: Sex Determination
- Lecture 17: Stem Cells and Cloning
- Lecture 18: The Evolution of Development
General Course Information

Instructor
Liesl McCormick
Ivanrysw@uoregon.edu
office: 65 Klamath
office hours: M 10:00am - 12:00pm
W 10:00am - 12:00pm
or by appointment

GTF
Ben Kanter
brkanter@gmail.com
office: 360 Onyx
office hour: [tbd]

Email Etiquette
When emailing the instructor or GTF, please include "Bi328" in the subject line. This helps ensure that we will not overlook your email by accident. We will try to answer your email in a timely manner, however, we do not always check our email in the late evening or on weekends.

Time and Location
Lecture: 16 Pacific T 10:00am - 11:20am
Th 10:00am - 11:20am
Lab: 5 Klamath T 12:00pm - 1:50pm or 2:00pm - 3:50pm

Inclement Weather
If there is an ice storm, it is possible that we will cancel classes, even if the University remains open. Cancellation notices will be posted on Blackboard.

Website
All class information will be posted on Blackboard.

Work Load
The standard expectation for a four-credit course is that you will receive four hours of instruction per week and put in at least eight hours outside of class per week doing the reading, preparing assignments, and studying for exams. This expectation includes the laboratory section as well as the lecture portion of the course.

Required Text
The readings are from the 6th Edition of Developmental Biology by Scott Gilbert.
You can find a used copy online very easily, or the textbook is also available online at PubMed Books: http://www.ncbi.nlm.nih.gov/books/NBK9983/
Links to the required readings will be posted on Blackboard.

Required Supplies
iClicker (available in the Duck Store)

Additional Readings
Any additional readings will be posted on Blackboard as PDFs.
Reading Assignments
The reading assignments are listed on the last page of this syllabus. Reading assignments should be completed before the lecture or lab section for which they are assigned. Quizzes that cover the reading material may be given during lecture or lab.

Participation
We are using iClickers as a way to facilitate classroom participation and discussion. Please bring your iClicker to lecture, as you will receive credit for "clicking in" during class time - you will be scored on participation rather than correctness of answer. You will be allowed to miss two class periods without "clicking in" before we begin to deduct from your participation grade.

Exams
There will be three exams: two midterms and one final. The final will essentially be a third midterm. Exam material is cumulative because concepts carry over from one topic to the next. However, each exam will primarily focus on the material covered within the specific section of the course preceding that exam. Exams will include material from the lectures, readings, and laboratories. The exams will most likely be a combination of multiple choice and short answer questions. The schedule for the exams is listed on the last page of this syllabus.

Labs
Laboratory sections are held once a week and are mandatory. The laboratory assignments are posted on Blackboard under the appropriate week. The laboratory assignments should be downloaded, printed, and brought to the laboratory section. Completed laboratory assignments are due [tbd]. If for some reason you cannot attend your normal laboratory section, you may not attend the other section because the lab rooms have a limited capacity that is set by the fire code. Contact the GTF if you know that you are going to miss your normal laboratory section - it is best if you can make contact before missing lab, so that we can make the necessary arrangements so that you can receive credit.

Grading
20% Exam 1
20% Exam 2
25% Final Exam (Exam 3)
20% Participation (iClickers and class discussion)
15% Laboratory Work

General Policy on Missed Assignments
Assignments must be turned in on time, and there are no early exams or "make-up" exams. If you are ill, or have an emergency where you cannot attend class, or you miss an assignment or an exam due to illness or emergency, please contact the instructor. It is best if you can make contact before missing an assignment or exam - we can make the necessary arrangements so that you can receive credit.
Classroom Etiquette
Please arrive on time. Lectures and labs begin promptly on the hour. Please do not leave early, as this is disruptive to everyone. If you have an unusual circumstance and must leave early, please sit near the exit so that you may leave quietly. Please be respectful of your fellow students.

Inclusiveness
The University of Oregon is working to create inclusive learning environments. Please notify the instructor if there are aspects of the instruction or design of this course that result in barriers to your participation. You may also wish to contact Disability Services in 164 Oregon Hall at 541.346.1155 or disabsrv@uoregon.edu.

Plagiarism & Cheating
Plagiarism and cheating will not be tolerated. You are expected to do your own work on all homework, assignments, and exams. You are encouraged to discuss ideas with other students and study together, but do not copy anyone else's work, and don't allow anyone else to copy your work. All students are expected to conform to the student conduct code (see URL below) - students not in compliance will be brought to the attention of the University.

Student Conduct Code
http://www.uoregon.edu/~stl/programs/student_judi_affairs/conduct-code.htm
### Overview of Lectures, Labs, Readings, and Exams

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Meeting</th>
<th>Topic</th>
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<tr>
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