

Biol 4464/8803 Developmental Biology, Spring 2015

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Office hrs by appointment.

Text: readings from recent review articles, primary literature and on-line resources, including *Developmental Biology Interactive*: www.devbio.biology.gatech.edu. This web site also has a working schedule of topics and readings.

Learning Outcomes: Students should think like a developmental biologist, and be able to:

1. Pose questions and hypotheses concerning developmental processes that are amenable to experimental testing.
2. Outline experiments or experimental strategies to test specific hypotheses concerning developmental processes.
3. Analyze published experimental procedures and data to determine if the authors' conclusions are warranted.
4. Identify appropriate model organisms for testing hypotheses or models about different aspects of development.
5. Communicate current findings, ideas and models of developmental processes to peers, both orally and on the web.

Assessment (Grading):

Learning Catalytics & other assignments - 20%

3 midterm exams - 20% each, x 3 = 60% (3 midterms + final exam equivalent to a midterm; lowest grade dropped)

Final group project - 20% (*students will create, peer-review, and publish web pages dedicated to their group's model organism, with their own reviews of recent published papers.*)

Learning Catalytics:

We will use Learning Catalytics (learningcatalytics.com) for guided instruction and peer group problem solving. You must purchase a student account, for \$12 for the semester.

My Philosophy of What Is Important:

Even an expert can no longer command more than a fraction of the information in even a subfield of biology. That's why we have books, review articles and databases. The names of genes and proteins, their particular activities in particular pathways - will change as our understanding advances. What is more important is that we integrate the information to build models and hypotheses, test them rigorously, and properly interpret experimental results.

Honor Code:

You are expected to abide by Georgia Tech's honor code (www.honor.gatech.edu). We will specify for each assignment what is and is not allowable in terms of collaboration. **Plagiarism is never allowable** - all writing must be in *your own words*, AND you must cite or acknowledge all sources of ideas, text, and images or figures. Any direct quotes or excerpts must be identified