

Biology 595: Topics in Cellular and Molecular Biology
Evo Devo
Fall 2006
Meeting time: TBD

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The purpose of this course is to familiarize graduate students with various topics in the area of cellular and molecular biology. This course also helps graduate students to learn how to read and analyze the scientific literature. The format will be weekly discussions led by students.

There is no required textbook for this course, although readings from From DNA to Diversity by S. B. Carroll, J. K. Grenier, and S. D. Weatherbee will be used in the initial part of the course. Any students interested in purchasing the text should contact me for more information.

Each student will present twice (most likely). The initial presentations will be a chapter from From DNA to Diversity with an additional paper on the topic of the chapter to be chosen by the presenter. The second presentation will be on a field of Evo Devo of your choice with papers chosen by you. You must choose at least two papers to assign to the class to read, one of which can be a review, or you can choose two research papers that cover different aspects of the same topic.

As the presenter, you want to become the mini-expert in that area. Thus while you are giving the class two (maybe three papers) you should read as many papers as needed to be comfortable in that subject area. You will be expected to field questions on information related to but not necessarily in the readings you give the class. You are to lead the discussion and this class is meant to be a discussion more than a lecture, but as the presenter you will have to lead the class through the information.

For your presentation you should hand out to the class your readings the class the week before your presentation. I most approve these readings before they are handed out to the class, so you should talk to me early so I can approve the readings. On the day of the presentation you can give the class a hand-out that outlines your presentation and includes tables or figures from other papers that you want to reference (be sure to properly cite any information you use from other sources). You should also have ready a reference list to give to the class of the papers you used to prepare your presentation. Your goal should be to initiate and guide discussion on your topic, not just to lecture.

On the weeks that it is not your turn to present you should come to class prepared. You should have read the assigned papers and be prepared with questions on them. You are not expected to have understood everything you read, and areas in the reading that you did not completely

understand are good areas to develop questions on. You must come prepared to talk about the readings.

Your grade will be determined by the quality of your presentations and your participation in class.

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Schedule

Week	Date	Topic	Presenter(s)
1	Aug 21	Introduction	
2	Aug 28	A brief history of animals; The genetic toolkit for development	Sawyer
3	Sept. 5	Building animals Paper:	
4	Sept. 11	Evolution of the toolkit Paper:	
5	Sept. 18	Diversification of body plans and body parts Paper:	
6	Sept. 25	Evolution of morphological novelties Paper:	
7	Oct. 2	Morphological variation and species divergence Paper:	
8	Oct. 9	From DNA to diversity: the primacy of regulatory evolution Paper:	
9	Oct. 16	Break?	
10	Oct. 23	Student's choice	
11	Oct. 30	Student's choice	
12	Nov. 6	Student's choice	
13	Nov. 13	Student's choice	
14	Nov. 20	Thanksgiving Break	
15	Nov. 27	Student's choice	
16	Dec. 4	TBD	