

Advanced Molecular Genetics: Epigenetics (Bi 424/Bi 524) Spring 2009

Instructor: Eric Selker email: selker@uoregon.edu; office: 355D Streisinger; ph: 346-5193
Mondays and Wednesdays 10:00-11:20 (307 Vol.); office hours: Fri. 11-12 and by appt.

Course objectives, format, requirements and grading: The purpose of the course is to provide for in-depth study of advanced topics in genetics. Lectures will serve primarily to introduce topics. About one third of class meetings will be used for organized discussions on readings from the primary scientific literature. Students will serve as leaders for the corresponding discussion. Written responses to questions on the readings will be due at the beginning of each of the discussion periods. There will be a final exam but no midterm exams. A term paper in the form of a research proposal related to a topic of the course will be due on Wednesday of finals week. In the final several class meetings, each student will give a brief (~10 min.) oral presentation to the class on the subject of their term paper. The course will be limited to twenty students and will only be offered on a graded basis. Grading will be based on instructor's assessment of individual achievements in the following areas and will be weighted as indicated:

problem sets	35%
oral presentations and discussions	20%
written research proposal (term paper)	30%
final exam	15%

Readings: There will be no textbook. Copies of primary discussion papers will be placed in the reading room in Streisinger Hall and are required reading. Whenever possible, PDFs will also be made available on Departmental server (password protected). Additional readings may be suggested by the instructor and/or the discussion leaders.

Discussions and problem set logistics:

-Discussion leaders must arrange a meeting ("pre-discussion") with the instructor, e.g. on Friday before the Monday discussion .

-Problem sets will normally be handed out in the class period before the associated Discussion and will be due at start of the Discussion period; no credit will be given for late assignments.

Term paper and related oral presentation: This is similar to the research proposal part of a typical graduate student "comprehensive exam" (we can discuss this) but it should be 2000 words or less. The primary purpose of writing this research proposal is to gain experience identifying an interesting biological problem, proposing hypotheses or models to explain or solve the problem and designing experiments to test the hypotheses. Any topic discussed or related to those in the course is acceptable; you are encouraged to email the instructor a brief (few sentence) description of your proposed project. A selection of excellent papers that are relevant to the course but that will not be specifically addressed in the course will be made available. Please note that the term paper is not only a scientific exercise; it is a writing exercise as well. Think carefully about what you want to say; say it logically and concisely. After you are satisfied with your paper, put it down (e.g. 1-2 days) then reread it critically and see if you can improve it. You should put it through at least two drafts. The final copy should be printed double-spaced. Grading will be principally on the scientific merits of your ideas but writing quality will "count" as well, much as it does when a paper is being reviewed for publication or when a grant is being reviewed for possible funding. Both the proposal and the oral talk about the proposed research should include background to put the proposed work in context.