

Topics: Professional Skills in Biology

SPRING 2006

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Office hours:	Open or by appt.	Open, appt. preferred	Open, appt. preferred	Open or by appt.

Class Meeting Time and Place: Monday and Wednesday, 3:30-5:00, 221 Ackert

Course website: listed on K-state on line- will be used to upload proposals and handouts, reviewing forms, useful links, and other information

Course Objectives: To train new graduate students in the mechanics of becoming a scientist and professional biologist. This includes presentation of professional seminars, grant proposal writing, manuscript preparation and submission, interviewing for jobs, teaching skills, effective communication of scientific data in graphs and tables, and other topics.

Requirements: Students will produce a proposal letter of intent, a professional NSF or NIH style proposal with a 10 page body, a revised proposal, a 20 minute professional oral research presentation, and review forms for other student's proposals. Students will select the topics for their presentation and proposal; the same topic may be used for both. Students may use their proposed degree research topic for their presentation and proposal. The only limitation is that previous research cannot form the basis of the presentation and proposal (e.g., a PhD student cannot use their Masters' research for this course). Additionally, students will be required to submit written evaluations of their fellow students' class presentations, and 10 biological seminars (e.g. Division of Biology Friday seminars).

Grading: Course grades will be based on the oral presentation (40%), the written proposal including letter of intent and revised version (40%), evaluations of additional seminars (10%), and class participation (e.g. proposal evaluations, proposal summaries, in class reviews) (10%).

Schedule of Activities: Following is a tentative schedule of activities. A more detailed list of topics and dates of student presentations will be provided within the first few weeks of the semester.

Tentative Course Schedule

Meeting	Topic	Instructors
Weds Jan 18	Class Introduction, Forming a scientific research project (hypothesis and experimentation), surviving graduate school	All
Mon Jan 23	How to develop a scientific proposal	Johnson
Weds Jan 25	How to write a proposal	Johnson
Mon Jan 30	How to write a proposal	Johnson
Weds Feb 1	Effective scientific presentation (project letter of intent due)	Dodds/ Passarelli
Mon Feb 6	Teaching biology	Rintoul
Weds Feb 8	Writing a scientific paper	Passarelli
Mon Feb 13	Writing a scientific paper	Passarelli

Weds Feb 15	Effective scientific graphic preparation	Dodds
Mon Feb 20	Scientific posters	Dodds
Weds Feb 22	Applying for jobs/ writing a CV / professional networking	Rintoul/ Dodds
Mon Feb 27	How to review proposals and papers, writing an effective and constructive review	Passarelli
Weds Mar 1	Professional ethics/ mentoring relationships (5 outside presentation reviews due)	Passarelli
Mon Mar 6	Guest lecture	Research and sponsored programs
Weds Mar 8	Guest lecture	Education
Mon Mar 13	Polarity in the T-cell: A possibly novel Wnt pathway in <i>C. elegans</i>	Alam, Shuvo
	An overview of <i>Ehrlichia chaffeensis</i>	Fedrow, Alison
Weds Mar 15	Are shorebird declines related to pesticide exposure on the non-breeding grounds?	Strum, Khara
	Inflamed fat and the role of macrophages	Potts, Betsey
Mar 20-24	Spring Break	
Mon Mar 27	Interactions between grassland birds and their snake predators: the potential for conservation benefits or conflicts in the tallgrass prairie.	Klug, Page
	Rabies and the striped skunk	Barton, Heather
Weds Mar 29	Stoichiometric requirements of producers and consumers related to trophic status of a prairie stream	Standorf, Alyssa
	Growth and community structure of fishes in rivers of the Great Plains	Eitzmann, Jeffrey
Mon Apr 3	Proposal panels	All
Weds Apr 5	Reintroduction of galliformes: applying science to management	Kaler, Robert
	Investigation of <i>Fusarium graminearum</i> resistance/susceptibility in wheat using an Arabidopsis model system	Nalam, Vamsi
Mon Apr 10	General discussion of proposal strategies used by students (e.g. specific suggestions for improvements)	All
Weds Apr 12	Macrophages in ischemia/reperfusion-induced tissue injury	Brogan, Sara
	Behavioral ecology of the northern grasshopper mouse: "moonlighting" on the short grass prairie	Vannimwegen, Ron
Mon Apr 17	Exploring new routes to glucose: CAP/Cbl mediated insulin signaling pathway	Gupte, Anisha
	Characterization of environmental isolates of enterococci	Parrish, Torrey
Weds Apr 19	The role of autoantibodies in Systemic Lupus Erythematosus	Peterson, Gregory
	Potential role of lipoteichoic acid modification in <i>enterococcus faecalis</i> stress response	Allen, Darin
Mon Apr 24	Symbiotic bacteria in Wheat-Hessian Fly interaction	Bansal, Raman
	Capsular polysaccharide production in <i>Enterococcus faecalis</i>	Thurlow, Lance
Weds Apr 26	Movements of small mammals in response to disturbance	Gay, Michael
	Defining the role of extracellular proteases in <i>Enterococcus faecalis</i> virulence	Thomas, Vinai
May 3	Developmental flexibility and caste determination in termite society (final revised proposal due)	Weng Huang, Ju
Finals week	(5 outside presentation reviews due)	All