Graduate Seminar in Genetics (*BISC 8710*) - Fall 2017: Grant & Proposal Writing

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Office Hours: Monday 4-5 pm; Thursday 11 am- 2 pm.

Meeting time and location: Tuesdays 4:00- 7:00 pm, Larkin 370

Course objective: Gain skills and experience in writing and defending thesis/dissertation and grant proposals.

Credits: 3

Synopsis:

Writing research proposals is one of the most important practical activities in science. The process of writing a proposal is also central to the scientific process, since it necessitates reviewing and synthesizing relevant literature, formulating objectives and hypotheses, and creating a detailed plan for research activities. Funding for science is extremely limited, with grant programs becoming increasingly competitive. To successfully obtain funding, it is important to understand the review process and criteria and the components of a strong proposal. In this course, students will gain practical experience in writing and reviewing thesis/dissertation and grant proposals, which will generally be based on the students' own research plans. They will also learn to identify proposal strengths and weaknesses and ways to improve proposals. These skills will aid proposal writing as well as scientific communication more generally.

Requirements:

Students are required to attend and to actively engage and participate in all classes. The course will involve writing activities and workshops during class time, so students should plan to bring a laptop to class. Students will write a short Sigma Xi style grant proposal and a full thesis or dissertation proposal. They will submit drafts, review proposals of fellow students, respond to reviewer comments, revise their drafts and submit final grant proposal versions. Students will prepare a budget and an NIH style CV. Students will also present and defend their proposals. Note that students must present their own work and cite sources appropriately; plagiarism will not be tolerated.

Grading:

15%: Sigma Xi proposal
10%: Thesis/dissertation proposal draft
30%: Final Thesis/dissertation proposal
15%: Proposal defense
5% : NIH CV
25%: Attendance and participation, including assignments, readings and in-class activities

The grade scale will be as follows.

A: 93-100; A-: 90-92; B+: 87-89; B: 83-86; B-: 80-82; C+: 77-79; C: 73-76; C-: 70-72
D: 60-69; F: below 60

Schedule:

Sept. 5: Course overview, coming up with ideas for proposals, finding sources of funding, {F&K}

Sept. 12: Basics of grant proposal writing, elements of strong proposals; Sigma Xi proposal instructions (including budget). {F}

Sept. 19: Motivation for the project, significance, implications, applications and outcomes; aims, hypotheses, predictions, questions; Thesis/dissertation proposal instructions {K}

Sept. 26: Writing clarity and style, **Sigma Xi proposal due** {F}

Oct. 3: Background, proposal planning, reviewing the literature {K}

Oct. 10: Approach and Methods{F}

Oct. 17: Preliminary results {K}

Oct. 24: Proposals for education, infrastructure, meetings and workshops; broader impacts {F}

Oct. 31: Guest lecture by Kris Wolff; Preparing your NIH and NSF C.V. {K}
Thesis/dissertation proposal draft due

Nov. 7: Defending your proposal {F}

Nov. 14: Panel Discussion {F} **Reviews of thesis/dissertation proposals due**

Nov. 21: Revising and responding to reviewer comments; Preparing budgets, grant administration {K}

Nov. 28: Proposal defenses {K}; **NIH CV due**

Dec. 5: Proposal defenses {F};

Dec. 12: Course evaluations and discussion {K}; **Final thesis/dissertation proposals due**

{Instructor for the day- F = Franks, K = Kundakovic}