Course Description and Syllabus
Instructors: Drs. Jim Stivers and Sean Taverna

**ME:330.714: Essential Grantsmanship: Writing the Research Grant Proposal**
(Held each Tuesday from 2-4pm beginning 9/20 and ending on 11/1/2016)

**Course description:** This course is designed to provide a mentored opportunity for students to build grantsmanship skills through gaining experience in writing, reading and reviewing research proposals. During this course, students will be guided through the ins and outs of developing a polished grant application, beginning with deciding upon the research topic/question and ending with the crafting of a ready-to-submit grant proposal in the NIH F31 format. In addition, students will improve their communication skills through a series of chalk talks during which they will describe their grant objectives and experimental design to a group of peers and a faculty preceptor. Finally, students will gain experience in reviewing and composing written critiques of research proposals that will be discussed throughout the course and during a culminating NIH-style mock study section.

*Given the highly interactive structure of this course, there will only be space for seven pharmacology program students who are beginning their third year in the graduate program. This timing is intended to facilitate preparation of your preliminary thesis proposal before your first thesis committee meeting. If more students are interested, including students from other graduate programs, the instructors will make considerations based on seniority (i.e. impending graduation) and whether the student plans to submit a fellowship proposal in the immediate future. At their discretion, the instructors will allow auditing by up to four additional students, but due to the interactive format, these students will not present chalk talks or receive instructor feedback on their written proposal. However, auditing students can form their own mock study sections and student reviews if they desire. Students who cannot participate due to space limitations will be given first priority at the next course offering.*

**Learning Objectives**

1. Gain an understanding of the process of a developing a research proposal.
2. Create a proposal that is ready for submission to a funding agency.
3. Acquire experience reviewing and providing written criticism of grant applications.

**Session 1 (week 1)**

1 hr introductory lecture covering:
- Course logistics and goals
- Important elements of a grant, examples of good and bad style
- How to choose a good research question/proposal topic

**Session 2 (week 2, 2 hours)**

- Students present a short chalk talk outlining their potential specific aims.
- Student peers and instructor(s) provide real-time feedback regarding the research topic/question.
  Based on this feedback students will draft final specific aims to be turned in and distributed to the group within 5 days. Along with the specific aims, students will also provide 5 key papers related to the topic.
  Two other students and an instructor will provide written feedback on the specific aims that will be discussed at the next session.

**Session 3 (week 3, 2 hours):**

- Discuss instructor and peer review feedback on specific aims.

**Session 4 (week 4, 2 hours):**

- Students present a chalk talk outlining their entire research proposal taking into account the comments on their specific aims that were received during the previous session.
• Peers and instructor(s) provide real-time feedback on the outline of the full proposal. Incorporating this feedback, students will draft a six-page preliminary proposal following the NIH NRSA F31 predoctoral fellowship format.
• The preliminary draft will be turned in and distributed to the group within 10 days. Two other students and an instructor will read the preliminary proposal and provide written feedback on it that will be discussed at the next session.

**No class week 5 – preliminary proposal writing period.**

Session 5 (week 6, 2 hours):
• Discuss instructor and peer review feedback on preliminary proposal
• After the discussion of the reviews, students will draft their final proposals to be submitted to the group within 5 days. Two students and an instructor will read the final proposal and will write critiques to be discussed during the mock study section.

Session 6 (week 7, 2 hours)
• Mock study section
• Revised grant proposals will receive written feedback from instructor(s) and student peer reviewers. All proposals will be discussed in the group with specific students assigned to present the proposal as in a study section. No scoring will take place, just discussion and presentation of the proposal.