Astro 736: Writing for Astronomers
(a.k.a. How to Get Telescope Time, Funding, and Jobs)

Instructor: Michael Liu
Semester: Spring 2013 (2 credits)
Meeting Time: TBD

Along with scientific expertise and technical skills, one of the most important components of being a successful astronomer is the ability to communicate effectively. A significant portion of your future success will rely on being able to convey in writing your ideas and plans to a wide range of audiences. However, in contrast to scientific and technical knowledge, there are very few structured opportunities for students to improve their professional writing. This class will help you to cultivate the relevant skills through a mix of lectures and practical experience, working closely with the instructor and your peers.

In contrast to most graduate seminars, we will not focus on a single large term paper. Instead, we will write and re-write a few short pieces (1-3 pages), since this is the most common length that you will encounter. We will be writing, editing & reviewing the most common formats: personal research statement, telescope proposal, and popular science article. We will discuss successful and unsuccessful approaches to writing these types of pieces, including tips, recipes, and rubrics. (Note that this seminar entails more work than most of our graduate seminars.)

The workload will consist of weekly writing assignments, intermixed with light reading, editing, and critiquing. The content of the writing assignments will be based on astronomical review articles (e.g., Annual Reviews) and journal papers chosen by each student. Thus, this class should also be an opportunity to learn more about a topic of direct interest to you. One tangible end-product should be content that can be applied for actual professional use. Along the way, the class will also provide some practical experience in commonly used tools (e.g., Latex) and some vocational training (e.g., peer review).

Past experience suggests that 2nd and 3rd-year graduate students are probably best-matched to this course, but students of all levels are welcome. Indeed senior students no longer taking classes may find this seminar useful for their ongoing research. However, the fundamental premise of this class is LEARN BY DOING, and thus students must be enrolled for a grade to participate - no auditing or pass/fail. Everyone is welcome to come to the first two sessions to learn more about the class, but after that you must be enrolled. The total enrollment may be capped at a number TBD, since the class does have a significant interactive component.
No actual telescope time, funding, or jobs will be dispersed as part of this class.

Topics to be covered:
- Principles of effective science writing
- Style & structure
- Formatting & mechanics
- Popular articles
- Personal research statements
- Observing proposals
- Peer review
- Illustrations and visual design