Astronomy 496 RI  
Research Seminar  
Syllabus: Spring 2017  

Meets: Thursday at 4:00-4:50 pm  
Astronomy Building – Room 134  

Instructor(s): Professor Brian Fields and Faculty  
Office: Astronomy 216  
Phone: 333-5529  
E-mail: bdfields@illinois.edu  

This seminar introduces research projects of faculty in Astronomy and Astrophysics to first-year Astronomy graduate students and upper-level undergraduate students in astronomy, physics, and physical sciences. Students will meet with a different faculty member for one hour each week informally to find out what the faculty member is doing in Astronomical or Astrophysical research. Doing independent study and research projects with a faculty member are important and effective ways for students to learn in a realistic context. They provide good preparation for summer research assistantships and fellowships.  

Requirements to pass the course:  

**NO MORE than two absences are allowed.**  

**A two-page research proposal or report.** (Deadline 5:00pm, Wed. May 3)  
A first-year astronomy graduate student needs to write a proposal about the research project he/she wants to pursue using the summer fellowship. The proposal needs to be approved and endorsed by the faculty member who is to supervise the project.  

Other students need to write a report on one particular lecture or several lectures.  

Please correspond with questions, conflicts, or illness to rsbare@illinois.edu
ASTR 496RI Course Report

Due date: 5:00 pm, Wed. May 3, 2017
Submit by email: bdfields@illinois.edu

Graduate Students

1. Find a faculty advisor who will work with you for the summer, and agree on a project you will work on. Don’t wait until May to do this!
2. Write a 2-page proposal for your summer research. It should have:
   a. a title
   b. your name and the name of your summer advisor
   c. a description of the work you intend to do
   d. the expected outcomes
   e. and its expected significance.
   You may cite a few key references but you do not need a long bibliography. You should consult with your summer advisor while writing the report. Email the final report to me.
3. Arrange for your summer advisor to send me an endorsement email that says:
   "I have read and approve the summer research proposal of [NAME], entitled [TITLE]."
4. To get credit for the course you need both a report and the instructor’s endorsement email.

Undergraduate Students

Write a 2 page report on one or two of the talks you heard this semester. Write about what interested you, but here are some questions to guide your thinking:

a. Which faculty member(s) gave the talk(s)?
b. What is the larger topic she/he works on, e.g., cosmology, star formation, black holes, supernovae, etc?
c. What are the big questions she/he is trying to address?
d. Is her/his work primarily theoretical, observational, simulations, laboratory based, or a combination?
e. What did you find most surprising or interesting or memorable about her/his work?
f. What about this subject is confusing to you and/or you would like to learn more about?