Course goals

The primary goal of this course is to build your ability to discuss cutting edge research in physics, from particle physics to solid state physics to astrophysics. This will be based upon your readings and discussions of research articles and semi-popular expositions. As part of understanding the structure of physics research, you will learn more about both the technical language of conceptual physics and the diverse set of activities that physicists are engaged in. A secondary goal is to help you start thinking about research opportunities for yourself.

Instructor

Prof. Alan Middleton
Physics Building Rm. 213 or Rm. 201
E-mail: aam@syr.edu
Office phone: (315)443-3901
Office hours: No fixed hours. Send me e-mail me to ask questions or set up an appointment; I am often free for drop-by discussions.

Course grade

Your course grade is based upon class participation and weekly article responses. Everyone starts presumed to be receiving an A-. If you miss a class or don’t complete an assignment at a satisfactory level, your grade drops by a notch (e.g., A- to B+). If you read carefully and contribute to class discussions, your grade will be raised a notch. I hope that everyone earns an A.

What we will do

We will have 15 class meetings, Tuesdays 5:00-6:20, in Physics Building 204. We will discuss class readings and recent news in physics. We may have a local field trip or two to labs in the building. You will also interview a faculty member about their research.

I will provide readings each week. You should take two hours, give or take, between classes to read the articles and do some research on the vocabulary and central concepts. Some articles will be difficult to read!

Using a BlackBoard form, you will submit answers to the following questions:

1. What is the main idea of the article?
2. By what method was the knowledge obtained?
3. Why is this topic interesting and how is it related to other topics in physics?
4. What aspects of the article do you understand well?
5. What aspects of the article are hard to understand?

Your answers should total somewhere around 400 words. Please check your spelling and grammar! I will read your work before we meet in class. We will discuss the articles based on your submissions.

Sometime during the semester, you will present to the rest of the class the results of your interview with a faculty member.

Topics

We will discuss black holes, graphene, nanopores, particle physics, pulsars, humor, LIGO, quantum physics, physics culture, evidence for the Big Bang, invisibility cloaks, and other student-suggested topics.
Spring 2016, PHY250: Journal Club in Physics

Course web page
You can find course information, including the readings for this course and my records of your attendance, at http://blackboard.syr.edu

Academic integrity
The Syracuse University Academic Integrity Policy holds students accountable for the integrity of the work they submit. Discuss your readings with others, but write up your own essays. Grades will be reduced very significantly if there is plagiarism. For more information and the complete University policy, see http://academicintegrity.syr.edu.

Disabilities
Students who are in need of disability-related academic accommodations must register with the Office of Disability Services (ODS), 804 University Avenue, Room 309, 315-443-4498. Students with authorized disability-related accommodations should provide a current Accommodation Authorization Letter from ODS to the instructor and review those accommodations with the instructor. For further information, see the ODS website, Office of Disability Services: http://disabilityservices.syr.edu/.

Religious observances
SU’s religious observances policy, found at http://supolicies.syr.edu/emp_ben/religious_observance.htm, protects your rights to observe religious holy days according to your tradition. You have the opportunity to make up any course requirements that may be missed due to a religious observance provided you notify the course instructor before the end of the second week of classes. You can use the online notification process is available through MySlice/Student Services/Enrollment/My Religious Observances from the first day of class until the end of the second week of class.