

MEET YOUR ADVISOR REGULARLY!

LIST OF ADVISORS AND OFFICE HOURS

<http://www.phys.ufl.edu/academics/undergraduate/>

OR SNED AN E-MAIL TO ADVISING@PHYS.UFL.EDU

UNDERGRADUATE RESEARCH

Undergraduate research is an important component in undergraduate education. Here, I would like to highlight some of the most frequently asked questions on undergraduate research with general answers. I would like to stress a couple of important things that you have to keep in mind in doing research:

1. **Your priority should be in your class work.** Make balanced investment of your time and effort not to affect academic performance.
2. **Research requires patience.** The goal of your undergraduate research should not be producing papers for your graduate application. In many of physics research areas, meaningful results come out only after years of hard work and dedication. *The number of papers is not the only measure of research activity.*

Q: What is Undergraduate Research?

A: Undergraduate research is a real research project. The results of the experiment or calculation are not known ahead of time. The results are thus original. It is not a book report or literature survey, although you may start your project with a literature survey. A good research project will also be at the right level for the student. There are some experimental projects which with the help of a good advisor you can start as freshman or sophomores. Some experimental projects require our electronics lab or the machine shop course. There is a similar range of theory projects. If you wish to study grand unification theories, then there is probably little you can do as an undergraduate. On the other hand, there are plenty of theoretical projects which you can do as an undergraduate.

Q: Why should I bother to do Undergraduate Research?

A: Research is different from course work. The answer to a research project is not known ahead of time. In some cases the question is not even known. A homework problem takes at most a week or two, while research projects take months or years. While exams have a time limit where speed is of the essence, persistence and accuracy are more important in research. There is not simple correlation between performance in courses and research ability. A hard working and persistent B or B+ student may do much better than a student with a 4.0 GPA. Another reason to do research is that many graduate schools and awards now ask for one's research experience. There are clear sections in applications devoted to prior research experience as well as research interests or even a research plan. Furthermore, based on feedback from some of our graduating students, it may be becoming almost necessary to have a publication at least in the form of a preprint to get into the elite graduate schools in Physics. Thus, given the choice between another major and a significant research project it is probably best to do the research project. Finally, yet another reason to do research is that you can in cases be paid for it. Both REU programs and the University Scholars Program pay a stipend (see below). Students may also be paid off of grants depending on the faculty member and the usefulness of the student. I prefer to have students work for me for a semester before I consider paying them.

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UF PHYSICS UNDERGRADUATE ADVISING NEWSLETTER

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Q: When should I start Undergraduate Research?

A: There is no hard and fast rule for this; however, here are some guidelines. For research during the semester, some students start working in the laboratories as early as their freshman year. It is more common for students to start in their sophomore or junior year. Starting in your senior year has been done in the past, but it is not a good idea because you will have less time to do research because you will graduate soon. No matter when you start, make sure that you are willing to make the time commitment to do research. The benefit from doing research in applying to graduate school is from the letters of recommendation you get from your research advisor. If you do not work hard, it is unlikely that you will get a good letter of recommendation.

NSF REU PROGRAM

It is an NSF funded summer research program at various REU sites in US and abroad. Students should survey the sites and apply individually. For 10 weeks, students will be involved in a specific research group and conduct research. Travel expenses and housing will be provided in addition to stipend of about \$5,000 for the period. There will be an SPS meeting on REU in January. Stay tuned!

http://www.nsf.gov/crssprgm/reu/reu_search.cfm

DOE

SULI (Science Undergraduate Laboratory Internship)

<http://www.scied.science.doe.gov/scied/erulf/about.html>

Types of research experiences taken by 2007 physics seniors.

	Percent
Thesis project or capstone experience on campus	40
On-campus research (i.e. faculty research project)	54
REU (NSF Research Exper. For Undergraduates)	23
National Lab	10
Industrial research co-op or internship	7
Other	7
None	26

Note: Percentages add to more than 100% because respondents were allowed to choose more than one type of research.

AIP Statistical Research Center, Physics and Astronomy Senior Survey

2010 SUMMER RESEARCH PROGRAMS

Research project participation by long-term career goals, 2007 physics seniors.

Career Goal	Percent with a Research Project
College or University teaching and research	86
Engineering position	65
Other science / technical position	76
Pre-college teaching	38
Other positions (non-science)	66
Overall	74

AIP Statistical Research Center, Physics and Astronomy Senior Survey

US Department of Energy Global Change Program is accepting applications for undergraduate summer research experience (SURE). Applications are available at <http://www.atmos.anl.gov/GCEP/>. The deadline is December 31, 2009.

MEDICAL PHYSICS

AAPM Summer Undergraduate Fellowship Program
<http://www.aapm.org/education/sufp/>

AAPM Minority Undergraduate Summer Experience
<http://www.aapm.org/education/MUSE/>

APS/IBM RESEARCH INTERNSHIP FOR UNDERGRADUATE WOMEN

On-line application by February 1 at
<http://www.aps.org/programs/women/scholarships/ibm/index.cfm>

Questions to Barbara Jones at bajones@almaden.ibm.com.