

# **The Physics 499 “Senior Thesis” Initiative University of Illinois at Urbana-Champaign**

## **Request for Proposals**

The Department of Physics at the University of Illinois at Urbana-Champaign (PHYS/UIUC) announces an intensive 10-week summer program to provide opportunities for talented undergraduate students to participate in hands-on research. Prospective participants are invited to submit proposals for research projects for the Summer 2008 program.

**Proposals are due in 215 Loomis Laboratory by 5:00 P.M. CST, December 5, 2007.  
Proposals submitted after the deadline will not be considered.**

### **The Initiative**

The PHYS/UIUC senior thesis program provides resources to enable undergraduate students to undertake research projects in experimental, theoretical, and computational physics. Of particular interest are projects in condensed matter physics, theoretical biophysics, theoretical astrophysics, and experimental particle and nuclear physics. Proposed research projects should offer interesting, meaningful research that can be conducted without extensive background knowledge, in a 10-week time frame, and with a broad mix of appropriate techniques and methodologies. An ideal project will offer the student a chance to develop expertise in a particular area while learning techniques applicable to many areas.

### **Objectives of the Program**

- Provide students with a meaningful experience in a first-class research environment.
- Enable students to work closely and directly with practicing researchers.
- Encourage students to develop their own “research literacy,” including familiarity with the literature, oral and written communications skills, time management, and teamwork skills.

### **Terms**

Grants are for a 10-week period, beginning June 9, 2008. Students are required to take Physics 496 during the Spring 2008 semester to be eligible for a Summer 2008 grant.

Grantees are required to provide a final presentation and a written report that:

- Summarize activities and results as they relate to the proposed objectives.
- Discuss the significance of the results.
- Recommend avenues for future work.

Grantees will participate in programmatic activities and group meetings during the 10-week grant period. Grantees are encouraged to participate in research-group and departmental seminars and colloquia.

### **Budget and Budget Justification**

A maximum of \$6,000 may be requested, of which \$3,500 must be a student stipend. Other eligible expenses are equipment, materials and supplies, telecommunications, travel, publication/dissemination of results, and institutional overhead.

Institutional overhead is to be calculated at a rate of 53 percent of the modified total direct cost (MTDC) base. Student stipends and equipment costs are to be excluded from the MTDC.

A narrative budget justification of no more than one page must be included in the proposal.

## Criteria

Proposals submitted under this RFP will be peer-reviewed, using the National Science Board merit review criteria. Review panels will present recommendations for awards to the PHYS/UIUC Senior Thesis Program Director, Professor S. Lance Cooper. Selection criteria include:

- Overall scientific and technical merit of the project.
- Feasibility.
- Qualifications, capabilities, and experience of the applicant.
- Realism of the proposed project costs.
- The potential of the project to improve the student's knowledge and skills.
- The inclusion of specific evaluation mechanisms for measuring the success of the proposed project.

## Proposals

Proposals may be ***no longer than 10 pages*** and should include the following:

- Cover page—maximum one page.
- Project summary, *including explicit statements regarding the “intellectual merit” and “broad impact” of the proposed work*—maximum one page.
- Project narrative, including a comprehensive description of the problem to be studied, expected outcomes and how they will be measured, and a discussion of the project's potential contribution to the applicant's science and engineering education—maximum four pages.
- References cited—doesn't count toward total page limit.
- Budget and justification (use the budget categories mentioned above under “Budget”)—maximum two pages.
- Proposer's *curriculum vitae*—maximum one page.

## Submission

Deliver ***two*** copies of your proposal to the Department of Physics, 215 Loomis Laboratory, MC-704, by 5:00 P.M. on Wednesday, December 5, 2007.

## Time Line

- Written proposals submitted by December 5, 2007. *Proposals received after the deadline will be returned without review.*
- Assigned proposals picked up by students on Thursday, December 6, 2007.
- Proposal Panel Review on Friday, December 7, 2007.
- Awards announced by Monday, December 10, 2007.
- Project implementation to start June 9, 2008.

For further information about this RFP, contact:

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The University of Illinois at Urbana-Champaign is an equal employment opportunity employer. Proposals from women and minorities historically underrepresented in science and engineering are particularly welcomed.