

# **Undergraduate Research in Physics 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 2014 program.

**Proposals must be submitted electronically to [cmelliot@illinois.edu](mailto:cmelliot@illinois.edu)  
by 6:30 PM CDT, April 25, 2014.  
Proposals submitted after the deadline will be returned without review.**

### **The Initiative**

The Department of Physics at the University of Illinois at Urbana-Champaign 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 experience 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 1, 2014 and extending through August 15, 2014.

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 \$5,000 may be requested, of which \$2,500 must be a student stipend. Other eligible expenses are materials and supplies, travel, publication/dissemination of results, and institutional overhead. Grant funds may not be used to purchase capital equipment.

Institutional overhead is to be calculated at a rate of 58.6 percent of the modified total direct cost (MTDC) base. Student stipends are excluded from the MTDC.

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

### **Evaluation 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 cognizant program officer, Dr. Douglas H. Beck. 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 project.

### **Proposal Content**

Proposals may be *no longer than 8 pages* and should include the following components:

- Cover page—maximum one page (see appended template).
- Project summary, including explicit statements regarding the “intellectual merit” and “broader impact” of the proposed work—maximum one page.
- Project narrative, including a comprehensive description of the proposed student research project, 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 4 pages.
- References cited—doesn't count toward total page limit.
- Budget form and justification (use the budget categories mentioned above under “Budget”)—maximum one page.
- Proposer's *curriculum vitae*—maximum one page.

### **Submission**

The complete proposal should be submitted electronically as an email attachment in one PDF file by **6:00 PM CDT, Friday, April 25**. Email your proposal to [cmelliott@illinois.edu](mailto:cmelliott@illinois.edu). Proposals submitted after the deadline will be returned without review.

### **Formatting Requirements**

Proposals must be assembled in the order indicated in the “Proposals” section of this program announcement, single-sided, on standard 8.5-in × 11-in white paper. Narrative sections of the proposal must be presented in a standard serif font, 11 pt or greater. Page margins of at least 1-in are required on all sides of a page.

### **Time Line**

- Proposals submitted by Friday, April 25, 2014.
- Review assignments emailed to reviewers, Saturday, April 26, 2014.
- Proposal panel review, Friday, May 2, 2014, Room 322, Loomis Laboratory of Physics.
- Awards announced by Monday, May 5, 2014.
- Project implementation to start June 1, 2014.

For further information about this RFP, contact:

Celia M. Elliott, Department of Physics  
215 Loomis Laboratory  
217-244-7725 • [cmelliott@illinois.edu](mailto:cmelliott@illinois.edu).

The University of Illinois at Urbana-Champaign is an equal employment opportunity employer. Proposals from women and members of minority groups historically underrepresented in physics are particularly welcomed.

## **Attachment 1. Sample Cover Page**

**Title of Project:**

**Principal Investigator:**

**Contact Information for PI (phone, email):**

**Proposed Start Date:**

**Duration:**

**Funds Requested:**

**Submitted to: Department of Physics, University of Illinois at Urbana-Champaign**

**Date Submitted:**