

Announcing International Research Opportunities for Penn State Undergraduate Students

Penn State's *Center for Language Science* (CLS) announces an exciting and unique opportunity for undergraduate students. With the generous support of funding from the National Science Foundation program *Partnerships for International Research and Education* (PIRE), the CLS will sponsor undergraduate students' travel to international sites during the summers to conduct research on the science of bilingualism. One of Penn State's main educational goals, in line with our country's key educational priorities, is to enrich the undergraduate academic experience by increasing participation of undergraduate students in research abroad. The PIRE grant ***"Bilingualism, mind, and brain: An interdisciplinary program in cognitive psychology, linguistics, and cognitive neuroscience,"*** awarded to the CLS on August 15th 2010 for a 5- year period, will allow for the creation of international research opportunities for eight qualified undergraduate students working on language research, who have had research experience with CLS faculty. CLS undergraduate students will receive funding to conduct innovative research on bilingualism at leading collaborating institutions in Europe and Asia. These include Bangor University (UK), Max Planck Institute Leipzig (Germany), Radboud University Nijmegen (the Netherlands), University of Granada (Spain), University of Pompeu Fabra, Barcelona (Spain), Beijing Normal University (China), and University of Hong Kong (China). Funding will cover airfare, housing and meals, tuition, and some research expenses. Applications are due November 01st, 2010 and must be sent my email to Amber Evans at pireundergrads@gmail.com. No hardcopy applications will be accepted.

1. Application materials:

- (1) Completed application form. To obtain a copy of the application form, please contact Amber Evans at pireundergrads@gmail.com. Questions about the application process and requests for application forms can be directed to Amber Evans starting September 20th.
- (2) Copy of applicant's Curriculum Vitae
- (3) A statement indicating how the research-abroad experience will enhance the applicant's future educational and professional plans
- (4) A letter of recommendation from the CLS faculty research advisor. The letter of recommendation must be sent directly to Amber Evans at pireundergrads@gmail.com.

2. Eligibility requirements:

- (1) Must be a US citizen
- (2) Must be actively conducting research on language with a planned project for the proposed summer research experience that fits with the goals of the CLS PIRE project (see the abstract for the PIRE grant appended below).
- (3) Must have completed research experience with a CLS research faculty member for a minimum of a semester. Students currently enrolled in research experiences with CLS

faculty are eligible to apply. Priority will be given to students who have had more than one semester of research experience.

- (4) Eligible students will have at least once semester in residence remaining at PSU after returning from the summer abroad research experience.

IMPORTANT:

- Priority will be given to students with more research experience and to junior students. Students who currently do not have research experience can prepare themselves for future eligibility by enrolling in research credits with a CLS faculty member in Spring 2011 to apply for the following cycle. We anticipate that the PIRE program will be available for five consecutive summers, beginning in the Summer of 2011.
- Students will be required to enroll in 6 credits of LING 496 during the summer of travel abroad.

Award#0968369 - PIRE: Bilingualism, mind, and brain: An interdisciplinary program in cognitive psychology, linguistics, and cognitive neuroscience

This PIRE project, a collaboration between three U.S. and seven foreign institutions in Europe and Asia, will investigate the cognitive and neural consequences of bilingualism to understand the ways in which multiple languages are learned and used. Recent behavioral and neuroscience evidence suggests that there is more extensive processing interaction between the two languages of a bilingual than previously thought, and this is true even when bilinguals are using only one language. Bilingual science therefore provides a tool for revealing fundamental principles about the mind and the brain otherwise obscured in research focused on monolinguals. The next stage of research on bilingualism calls for national and international collaborations to unify our understanding of the nature of the bilingual mind and brain, the process of bilingual language development, and the consequences of bilingualism for cognition. International collaboration is essential for accessibility to widely differing bilingual populations of several spoken, written, and signed languages. This award enables an international network of collaborators with common research goals and methods to exploit unique and complementary opportunities to investigate properties of human languages. Leveraging the diverse perspectives inherent in interdisciplinary and cross-cultural research will facilitate the establishment of a world-class research context for investigating bilingualism science, enable generalization of research findings, and exploit bilingualism as a tool for investigating the representation and processing of language in the mind and brain.

This PIRE project will bring together the complementary international expertise of collaborators studying bilinguals who communicate in a variety of languages (e.g., Spanish, Catalan, Welsh, and Chinese). A unique feature of this project is the partnership of U.S. and Dutch scientists exploring the consequences of bimodal bilingualism in deaf people. The NSF-funded VL2 Science of Learning Center at Gallaudet University, a world leader in education for deaf students and research on topics related to deaf people, focuses on issues of visual language processing recognizing deaf readers as bilinguals using a signed language for communication yet reading a written language. Researchers in The Netherlands also study sign language and gesture, deaf literacy development, and speech-sign translation but using different signed and written languages. The convergence of these projects provides a unique opportunity for cross-linguistic collaboration and training that would not be possible in the U.S. alone.

Enthusiasm for bilingualism research naturally draws an unusually diverse group of students, scientists, and research participants. This PIRE project will be committed to harnessing that excitement to create opportunities for broadening participation in science by research participants from a broad spectrum of ages and linguistic abilities, and by students and researchers from groups under-represented in the sciences. This PIRE project will provide training and research opportunities to students and scientists not possible without the international collaboration, such as conducting research abroad, participating in virtual international colloquia, developing and sustaining international collaborations, and training by industrial partners with specific expertise in speech, literacy, and neuroimaging. The project also provides institutional opportunities for research with diverse populations, enriching undergraduate, graduate, and post-doctoral training, and increasing opportunities for early career faculty to develop research programs globally engaged and solidly grounded in cross-disciplinary collaborations. The nature of the science of bilingualism is inherently interdisciplinary and cross-cultural and this project provides opportunities for the participating U.S. institutions to strengthen international offices and activities, develop survey tools to evaluate student's international experiences, and provide energy and synergy for integration and for strengthening links across disciplinary units. This project will strengthen the U.S.'s scientific capital through international training not otherwise available in the U.S. U.S. institutions will benefit from attracting international visiting researchers and students to enrich the internationalizing initiatives and cultures on their campuses. The U.S. population is also increasingly bilingual with ever-diversifying demographic and cultural characteristics so research results are expected to reach well beyond academia.

U.S. project partners include The Pennsylvania State University, Gallaudet University (D.C.), and Haskins Laboratories at Yale University (CT). International partners include ESRC Centre for Research on Bilingualism in Theory and Practice, Bangor University (Bangor, UK), the Max Planck Institute for Human Cognitive and Brain Sciences (Leipzig, Germany), Universidad de Granada (Granada, Spain), Universitat Pompeu Fabra (Barcelona, Spain), Radboud University Nijmegen (Nijmegen, The Netherlands), Beijing Normal University (Beijing, China), and the University of Hong Kong (China).

This project was jointly funded by NSF's Office of International Science and Engineering and the Division of Behavioral and Cognitive Sciences.