

MOTIVATING UNDERGRADUATES TO ATTEND GRADUATE SCHOOL

Council of Graduate Schools
2007 Annual Meeting

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EARLY RESEARCH AND PIPELINE PROGRAMS

NATIONAL DISCIPLINE-BASED PROGRAMS

Alliances for Graduate Education and the Professoriate

<http://www.agep.us/>

The Alliance for Graduate Education and the Professoriate (AGEP) seeks to join together universities and colleges in the common mission of increasing the number of underrepresented minority students earning P.h.D. and positioning them to become leaders in science, technology, engineering and mathematics (STEM) fields.

Each AGEP alliance employs creative administrative strategies, develops infrastructure, and engages in substantive partnerships with non-doctoral-granting institutions (many minority-serving institutions) to enhance recruitment, retention, and advancement.

BRIDGES to the Doctorate

<http://www.nigms.nih.gov/Research/Mechanisms/BridgesDoctoral.htm>

The Bridges to the Doctorate Program provides support to institutions to facilitate the transfer and graduation of students from master's to doctoral degree-granting institutions. Specifically, this program is designed to increase the number of master's degree students who transfer and complete the Ph.D. degree in biomedical and behavioral sciences. This program targets students from groups underrepresented in the biomedical and behavioral research enterprise of the nation and/or populations disproportionately affected by health disparities (targeted groups).

Gates Millennium Scholars

<http://www.gmsp.org/>

The goal of GMS is to promote academic excellence and to provide an opportunity for outstanding minority students with significant financial need to reach their highest potential by:

- Reducing financial barriers for African-American, Hispanic American, American Indian/Alaska Native and Asian Pacific Islander American students with high academic and leadership promise who have a significant financial need
- Increasing the representation of these target groups in the disciplines of education, engineering, library science, mathematics, public health, and the sciences, where these groups are severely underrepresented
- Developing a diversified cadre of future leaders for America by facilitating successful completion of bachelors, masters and doctoral degrees

- Providing seamless support from undergraduate through doctoral programs, for students selected as Gates Scholars entering target disciplines

Graduate School Funding for continuing Gates Scholars is in the areas of education, engineering, library science, mathematics, public health and sciences.

Integrative Graduate Education & Research Traineeship (IGERT)

www.igert.org/summer.asp

The Integrative Graduate Education and Research Traineeship (IGERT) program seeks to train scientists and engineers to address the global questions of the future. Through the use of innovative curricula and internships, and by focusing on problem-centered training, these programs give their graduates the edge needed to become leaders in their chosen fields.

National Conferences on Undergraduate Research

www.ncur.org/

The National Conferences on Undergraduate Research (NCUR), established in 1987, is dedicated to promoting undergraduate research, scholarship, and creative activity in all fields of study by sponsoring an annual conference for students. Unlike meetings of academic professional organizations, this gathering of young scholars welcomes presenters from all institutions of higher learning and from all corners of the academic curriculum.

National Science Foundation (undergraduate to graduate initiatives)

<http://www.nsf.gov/about/>

- The Research Experiences for Undergraduates (REU) program supports active research participation by undergraduate students in any of the areas of research funded by the National Science Foundation. REU projects involve students in meaningful ways in ongoing research programs or in research projects specifically designed for the REU program.
- Undergraduate Research Centers
- National Online Poster Sessions for Undergraduate Research

Summer Medical and Dental Education Program

www.smdep.org/

Summer Medical and Dental Education Program (SMDEP) is a **FREE** (full tuition, housing, and meals) six-week summer academic enrichment program that offers freshman and sophomore college students intensive and personalized medical and dental school preparation.

INSTITUTION-BASED PROGRAMS

CUNY Pipeline Programs

<http://web.gc.cuny.edu/oeodp/pages/pipeline.html>

For Undergraduates Interested in Careers in College Teaching and Research. The CUNY Pipeline Program is designed to provide educational and financial support to undergraduates interested in pursuing the Ph.D. in preparation for college level teaching and advanced research. Pipeline seeks to recruit students from groups currently underrepresented at our national Universities. Sponsored by the CUNY Office of Educational Opportunity and Diversity Programs.

Summer Pre-Graduate Research Experience Programs at University of North Carolina

www.uncres.org/spgre.html

The Summer Pre- Graduate Research Experience (SPGRE) Program is in its 20th year of offering undergraduate students throughout the country the opportunity to work full time on research projects under the direction of UNC-Chapel Hill faculty members.

Moore Undergraduate Research Apprentice Program at University of North Carolina

www.unc.edu/depts.murap

In 1989, MURAP began as an extension of the University of North Carolina's Summer Pre-Graduate Research Experience (SPGRE) that seeks to increase the number of minorities gaining research experience and pursuing doctoral degrees in the natural sciences. MURAP was set up to target students in the humanities and social sciences. In its initial years, the program began humbly with three students working under three UNC faculty mentors, always with a goal of addressing diversity within higher education. By 2005, the program has expanded to include up to 22 students and 10 faculty mentors per year.

University of Miami NSF SBE Alliance

<http://www6.miami.edu/grad/nsfsbealliance>

The "UM NSF SBE Summer Research Experience" offers extraordinary opportunities for research, personal growth, networking, and social interaction for undergraduates who are interested in pursuing academic careers.

INSTITUTIONAL CONSORTIUM PROGRAMS

Summer Research Opportunity Programs of the Committee on Institutional Cooperation

(Big Ten universities plus University of Chicago)

www.cic.uiuc.edu/programs/SROP/index.shtml

The Summer Research Opportunity Program (SROP) exposes talented undergraduates to professional and educational opportunities in the academy. The goal of the program is to increase the number of underrepresented students who pursue academic careers by enhancing their preparation for graduate study through intensive research experiences with faculty mentors.

The SROP was initiated in 1986 by the CIC Graduate Deans to encourage talented undergraduate students to pursue graduate study and subsequently academic careers. That first year 99 students participated; 529 students majoring in over one hundred fields of study are participating this year. Since this program began, some 7,000 students have participated.

The major activity of the SROP is an in-depth research experience with students working one-on-one with faculty mentors. SROP students are required to write a paper and an abstract describing their projects and to present the results of their work at a campus symposium.

Examples of Summer Research Opportunity Programs (SROP)

Northwestern University Summer Research Opportunity Program

www.tgs.northwestern.edu/studentlife/multiculturaloffice/research/srop

The program is eight weeks in length, from June 18 through August 9, 2007, and includes faculty supervised research, enrichment activities that prepare undergraduates for graduate school (i.e. graduate school application workshop, writing workshops, etc.), and a conference. Sophomores and juniors who

are from groups which have been traditionally underrepresented in graduate schools (e.g., certain racial and ethnic minorities, first-generation college students, etc.) are encouraged to apply for SROP.

Each student selected to participate in the program will work with a faculty member in the student's area of interest. The faculty member will: 1) help design and monitor an appropriate full-time research project for the student or incorporate the student into on-going research; 2) work with the student on an outline, rough draft, and final paper which summarize the research; and 3) supervise the student's presentation of the research at the forum/dinner which concludes the program.

Temple University Summer Research Opportunity Program

www.temple.edu/grad/agep/summer.htm

As part of our recruitment efforts at Temple University to increase the number of students receiving doctoral degrees in the Social, Behavioral and Economic Sciences (SBES) from underrepresented population groups, three major undergraduate audiences will be targeted. They include the students at Temple University, Historically Black colleges in their home region and Hispanic-serving institutions in their home region.

The Leadership Alliance (33 institutions)

www.theleadershipalliance.org/matriarch/MultiPiecePage.asp_Q_PageID_E_36_A_PageName_E_SummerResearchStructure

The Leadership Alliance Summer Research Early Identification Program (SR-EIP), offers undergraduates, interested in pursuing a PhD or MD/PhD, the opportunity to work for eight to ten weeks under the guidance of a faculty or research mentor at a participating Alliance institution. Through this one-on-one collaboration, students gain theoretical knowledge and practical training in academic research and scientific experimentation. The SR-EIP is designed to encourage students from groups traditionally underrepresented in the sciences, social sciences and humanities to consider research careers in the academic, public or private sectors.

FEDERAL PROGRAMS (TRIO)

Awards to Stimulate and Support Undergraduate Research Experiences

www.afosr.af.mil/ASSURE/assure_home.htm

The Department of Defense (DoD) sponsors the Awards to Stimulate and Support Undergraduate Research Experiences (ASSURE) program. The ASSURE program supports undergraduate research in DoD relevant disciplines and is designed to increase the number of high-quality undergraduate science and engineering majors who ultimately decide to pursue advanced degrees in these fields. A strong U.S. science and engineering workforce is of clear interest to the DoD, as the capability of producing superior technology is essential for future national security.

McNair Postbaccalaureate Achievement Program

<http://www.ed.gov/programs/triomcnair/index.html>

This program prepares participants for doctoral studies through involvement in research and other scholarly activities. Participants are from disadvantaged backgrounds and have demonstrated strong academic potential. Institutions work closely with participants as they complete their undergraduate requirements. Institutions encourage participants to enroll in graduate programs and then track their progress through to the successful completion of advanced degrees. The goal is to increase the attainment of Ph.D. degrees by students from underrepresented segments of society.

NASA

www.nasa.gov/audience/forstudents/postsecondary/learning/Undergraduate_Student_Research_Project.html

The National Aeronautics and Space Administration is seeking undergraduate students from diverse communities across the United States interested in unique hands-on experiences with NASA scientists and engineers. USRP internships are available year-round at all NASA facilities. Selected students receive a stipend and round-trip travel allowance. Students may apply for 15 week spring session, 10-week summer session, or 15-week fall session. USRP

CORPORATE PROGRAMS (too numerous to list; these are examples)

AT&T Labs Summer Internship Program

<http://www.research.att.com/index.cfm?portal=18>

AT&T Labs hires many summer research interns from all over the world. Most interns work with individual members of the technical staff on research projects for 10 to 12 weeks during the summer. Students give a short talk (20-30 minutes) on their work at the end of the summer.

Dow Jones & Company, Inc.

<http://www.dj.com/Careers/Internships/Internships.htm>

Marketing internship. Demonstrated knowledge of direct marketing required; economics, history, marketing, advertising, communications, literature and statistics majors. Description: Assist marketing managers in developing and implementing direct response marketing programs. Programs are designed to generate new customers for Dow Jones News/Retrieval, an electronic library of business and financial news and information. Salary: \$650-\$850 weekly. Location: Princeton NJ. Duration: Ten weeks.

Metropolitan Museum of Art

http://www.metmuseum.org/education/er_internship.asp

Curatorial Internship Programs. Recent graduate or student enrolled in Art History MA program and would use the internship to continue a career in Art History. Description: Intern will be assigned to a curatorial department to work on projects appropriate to her/his academic background, professional skills, and career goals. Salary: Honorarium: \$15,000. Location: New York NY.

An Opinion on Undergraduate Research—from the Chronicle of Higher Education

<http://chronicle.com/weekly/v53/i50/50a01201.htm>

What Good is Undergraduate Research Anyway? By Lila Guterman, From the issue dated August 17, 2007

...Three recent studies have tried to delineate what difference undergraduate research makes. Elaine Seymour, David Lopatto, and Susan H. Russell each took a different tack: Ms. Seymour's team, including Ms. Hunter, did in-depth interviews with students at four liberal-arts colleges; Mr. Lopatto developed a survey at those four colleges and then expanded it to other institutions; and Ms. Russell performed several surveys of thousands of students, some of whom had received grants from NSF for research. The National Survey of Student Engagement also began to ask questions on such topics this year, according to George D. Kuh, its director and the director of the Center for Postsecondary Research at Indiana University at Bloomington.

The three studies largely agreed on their conclusions — they found similar gains in undergraduate learning and effects on students' career paths — and their results largely reflected the accepted wisdom.

... The strongest, and perhaps most often made claim for undergraduate research — that it leads to more Ph.D.'s in science — is also among the hardest to test. Tracking students 10 years after they graduate is no simple task, and is likely to be subject to bias since those who stay in academe would be the easiest to find.

... Undergraduate research did not seem to have prompted new plans for graduate study, though for many students it did increase interest.