

Illinois Space Grant Consortium
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PROGRAM DESCRIPTION

The National Space Grant College and Fellowship Program consists of 52 state-based, university-led Space Grant Consortia in each of the 50 states plus the District of Columbia and the Commonwealth of Puerto Rico. Annually, each consortium receives funds to develop and implement student fellowships and scholarships programs; interdisciplinary space-related research infrastructure, education, and public service programs; and cooperative initiatives with industry, research laboratories, and state, local, and other governments. Space Grant operates at the intersection of NASA's interest as implemented by alignment with the Mission Directorates and the state's interests. Although it is primarily a higher education program, Space Grant programs encompass the entire length of the education pipeline, including elementary/secondary and informal education. The Illinois Space Grant Consortium is a Designated Consortium funded at a level of \$730,000 for fiscal year 2008.

PROGRAM GOALS

1. Commensurate with the amount of funds available, continue/expand the number of undergraduates involved in research.
2. Provide longitudinal tracking of the student participants.
3. With the aid of ISGC Seed Grants, increase faculty research funding, especially for junior faculty.
4. Increase the exposure to and knowledge level of pre-college teachers in the areas of physics, astronomy, earth science and other aerospace-related fields.
5. Activities and skills learned in ISGC teacher training programs are incorporated into classroom.
6. Establish long term tracking system for new affiliate.
7. Increase involvement of underrepresented minorities in Adler public programs.

PROGRAM/PROJECT BENEFIT TO OUTCOME (1,2, OR 3)

Outcome 1: One of our recent fellowship recipients was selected as a NASA Aeronautics Scholarship Program recipients. Ms. Arneson was one of five national awardees.

Outcome 2: ISGC participated in the planning and execution of the final NASA Future Forum in Chicago, October 2008. ISGC coordinated the student poster session involving undergraduate and graduate students from Illinois and Wisconsin. Also, ISGC facilitated the visit of six Chicago schools (240 students) to the Forum/Adler Planetarium education exhibits.

Outcome 3: ISGC will provide the leadership for the Great Midwest Space Grant Region for the next two years.

PROGRAM ACCOMPLISHMENTS

Outcome 1: ISGC awarded 31 scholarships and fellowships; 20% were awarded to underrepresented minority students and 35% awarded to females. Of the 40 students funded to participate in Higher Education and Research Infrastructure programs, 37 were undergraduates in research intern positions and 23% were minority students. Nineteen graduate and undergraduate students from Illinois and Wisconsin had the opportunity to give poster presentations to NASA and aerospace industry leadership at the Future Forum. Longitudinal tracking indicates that students are continuing in STEM fields, through graduate school or employment, upon completion of their current degree status. Five seed grants were awarded. This is the same number of grants as 2007, however, the more grants were awarded to junior faculty. One of the grants was made to a researcher at Southern Illinois University, reinvigorating SIU's participation in ISGC.

Outcome 2: As noted above, ISGC participated in several aspects of the Future Forum event in Chicago. Ten Chicago Public School teachers enrolled in DePaul's Master's of Science of Science Education (MSSE). ISGC provides funding for this graduate program. The annual Illinois Aerospace Institute had its greatest number of participants in summer 2008 (44). Another 12 applicants could not be accommodated. This is the first time that applications exceeded the program participant limit. Of the 44 participants, 24% were minority students. IAI had its first Native Alaskan participant.

Outcome 3: ISGC worked with numerous agencies, businesses and organizations on the Future Forum. The Forum provided an excellent event for networking, K-12 outreach, and showcasing student research.

PROGRAM CONTRIBUTIONS TO PART MEASURES

- **Longitudinal Tracking:** Total awards = 71; Fellowship/Scholarship = 31; Higher Education/Research Infrastructure = 40; 15 of the total awards presents underrepresented minority funding; All 71 of 2008 recipients still enrolled in current degree program. Of 2006-2007 funding recipients, 11 students have graduated and are pursuing graduate studies in a STEM area; 7 have graduated and pursuing employment in a STEM area (2 of the 5 working for aerospace contractors).
- **Course Development:** ISGC provided support toward the creation of two new aerospace engineering labs at Illinois Institute of Technology. An undergraduate student was funded to assist in the detailed design and construction of the labs. So far 45 students have taken the junior level course (Fall 2008).

ISGC provided support toward the development of a new hands-on introductory course for freshmen. In the course students will design and construct unmanned aerial vehicles (UAVs). The course is modeled after other freshman design courses that ISGC supported.

- **Matching Funds:** We expect to meet the \$547,000 matching funds commitment that we made in our 2008 budget.
- **Minority-Serving Institutions:** ISGC continued in its efforts to engage Chicago State University (CSU) in the consortium. January 2009 collaborated with faculty at CSU to write a proposal to the Minority Serving Institution Partnership Development announcement. Developing plans to continue and expand the relationship whether or not the proposal is successful.

IMPROVEMENTS MADE IN THE PAST YEAR

In response to recommendations from some of the ISGC campus directors, the funding proposal review process and the NASA intern selection process now involve a representative from each affiliate.

The consortium had been without a campus director at the University of Illinois at Chicago for over one year. In 2008, a new campus director was selected and UIC has become active again in the consortium.

PROGRAM PARTNERS AND ROLE OF PARTNERS IN PROJECT EXECUTION

University of Illinois at Urbana-Champaign:

PhD-granting research university

Lead institution for ISGC

Public, land grant institution

ISGC activities: management; undergraduate research; scholarships and fellowships; seed grants; higher education programs; K-12 summer camp

Illinois Institute of Technology:

PhD-granting research university

Private university

ISGC activities: undergraduate research; scholarships and fellowships; seed grants; higher education programs

Northwestern University:

PhD-granting research university

Private university

ISGC activities: undergraduate research; scholarships and fellowships; seed grants; K-12 summer program

The University of Chicago:

Ph-D granting research university

Private university

ISGC activities: undergraduate research; scholarships and fellowships; seed grants;

Southern Illinois University
Ph-D granting university
Public institution
ISGC activities: seed grant

University of Illinois at Chicago
PhD granting university
Public institution
ISGC activities: undergraduate research; scholarships and fellowships

DePaul University
Master's granting university
Private institution
Eighth-largest private, not-for-profit university in the nation
ISGC activities: scholarships; K-12 teacher training

Bradley University
Master's granting university (one PhD program)
Private Institution
ISGC activities: scholarships; seed grant; K-12 summer camp

Adler Planetarium & Astronomy Museum
Planetarium, education and research institution
Not-for-profit
ISGC activities: seed grants; K-12 teacher training; higher education programs; informal education programs
Discovery Center Museum
Educational and recreational institution
Not-for-profit
ISGC activities: K-12 teacher training; informal education programs; K-12 student programs