

Illinois Space Grant Consortium
University of Illinois at Urbana-Champaign
Philippe H. Geubelle
217-244-7648
www.ae.illinois.edu/ISGC

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 (select appropriate identifier) Designated Consortium funded at a level of \$785,000 for fiscal year 2009.

PROGRAM GOALS

Goal: Achieve a higher level of selectivity among scholarship/fellowship applications.

Objective: Increase the number of scholarship/fellowship applicants.

Goal: Have a diversified student population participating in our college-level programs.

Objective: Recruit a diversity of students to apply for ISGC scholarships/fellowships and intern positions.

Goal: Provide opportunities for junior faculty to develop proposals for research funding.

Objective: Offer seed grant funding for junior faculty.

Goal: Provide a variety of internship opportunities for undergraduate students.

Objective: Establish consortium relationship with small aerospace/science companies in Illinois and re-establish relationship with Argonne and Fermilab.

Goal: Provide additional learning opportunities for students in the areas of aerospace engineering, astronomy, astrophysics, cosmology, and earth/planetary science.

Objective: Support the development of new aerospace/space-related science courses at the college level.

Goal: Increase the exposure to and knowledge level of pre-college teachers in the areas of physics, astronomy, earth science, and other aerospace-related fields.

Objective: Transition precollege funding from student-based programs to teacher-focused programs

Objective: Teacher participants incorporate activities and skills learned in teacher training programs into their classrooms.

Goal: Provide opportunities to expose the general public to aerospace/science information.

Objective: Offer informative aerospace/science informal education programs to the general public.

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

- Outcome 1: A very successful ISGC symposium was held Feb. 2010 in Chicago that allowed for 17 ISGC-supported students to present their work to their peers and faculty.
- Outcome 2: Nineteen Chicago Public School teachers enrolled in DePaul's Master's of Science of Science Education (MSSE); this is almost double the number in 2008.
- Outcome 3: Discovery Center Museum's YES program reached 21 sites in Rockford and the surrounding rural area, reaching over 13,600 people.

PROGRAM ACCOMPLISHMENTS

Outcome 1:

- ISGC awarded 35 scholarships and fellowships; 29% were awarded to underrepresented minority students and 37% awarded to females.
- Of the 52 students funded to participate in Higher Education and Research Infrastructure programs, 41 were undergraduates in research intern positions.
- Longitudinal tracking indicates that students are continuing in STEM fields, through graduate school or employment, upon completion of their current degree status.
- Seven seed grants were awarded. This is an increase over the number of grants in 2008; the grants were awarded to junior faculty in ISGC.
- After winning the MSI Partnership grant, we have fully integrated CSU into the activities of ISGC.
- ISGC has expanded the number of industry partners; i.e. opportunities for industry internships
- A very successful ISGC symposium was held Feb. 2010 in Chicago that allowed for ISGC-supported students to present their work to their peers and faculty.

Outcome 2:

Nineteen Chicago Public School teachers enrolled in DePaul's Master's of Science of Science Education (MSSE); this is almost double the number in 2008. ISGC provides funding for this graduate program.

Outcome 3:

Innovative informal education programs were funded at Adler Planetarium and Discovery Center Museum. These include a prototyping project for museum checkout totes and

training high school students to assist in Outreach to Space exhibits that are taken to rural Illinois areas.

PROGRAM CONTRIBUTIONS TO PART MEASURES

- Longitudinal Tracking:

Total awards = 87; Fellowship/Scholarship = 35; Higher Education = 9; Research Infrastructure = 43; 21% of the total awards were made to underrepresented minority students. The majority of the 2009 recipients are still enrolled in current degree programs. With the exception of one student, all of the students who have graduated are either attending graduate school in a STEM field or working in a STEM field.

- Course Development:

ISGC provided support toward the creation of two new aerospace lab courses; one in astronomy at SIUE and one in aerospace engineering at IIT.

- Matching Funds:

We expect to meet the \$598,109 that we committed to in our budget.

- Minority-Serving Institutions:

The Minority-Serving Institution Partnership proposal that we wrote with Chicago State University (CSU) was funded. CSU is now an affiliate of ISGC.

IMPROVEMENTS MADE IN THE PAST YEAR

- ISGC had reconnected with Western Illinois University; WIU requested that to postpone their participation in funding until 2011.
- By the end of 2009, ISGC had phased our K-12 student-focused programs; ISGC is now funding just teaching training programs in the Pre-College category.

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; course development; design/build/fly student projects

Illinois Institute of Technology:

PhD-granting research university

Private university

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

Northwestern University:
PhD-granting research university
Private university
ISGC activities: undergraduate research; scholarships and fellowships; seed grants; course development

The University of Chicago:
Master's-granting university (professional degrees in medical fields)
Private university
ISGC activities: undergraduate research; scholarships and fellowships; seed grants;

Southern Illinois University Edwardsville
Ph-D granting university
Public institution
ISGC activities: seed grants; scholarships and fellowships; course development

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

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; undergraduate research; seed grants

Bradley University
Master's granting university (one PhD program)
Private Institution
ISGC activities: scholarships; seed grants; K-12 teacher training

Chicago State University
Master's granting university
Public institution
Recognized as a Minority Serving Institution
ISGC activities: undergraduate research; scholarships and fellowships; seed grants; course development

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