

Iowa Space Grant Consortium

Iowa State University (Lead Institution)

Dr. William J. Byrd

515-294-3106

www.ia.spacegrant.org

Affiliate Members:

- Drake University
- Iowa State University
- University of Iowa
- University of Northern Iowa
- Ames Laboratory of the U.S. Department of Energy
- National Soil Tilth Laboratory of the U.S. Department of Agriculture
- Office of Aviation of the Iowa Department of Transportation
- Geological Survey of the Iowa Department of Natural Resources
- Iowa Department of Education
- Rockwell Collins, Inc.
- Softronics Ltd.
- Space Explorers, Inc.
- The Grout Museums
- The Iowa Academy of Science
- The Iowa Aviation Promotion Group
- The Science Center of Iowa
- The Science Station

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 Iowa Space Grant Consortium (ISGC) is a Designated Consortium funded at a level of \$590,000 for fiscal year 2007.

PROGRAM RELEVANCE TO NASA

Space Grant consortia build human capital and research expertise to support NASA programs and missions, expand NASA's expertise and educational networks, and bring knowledge and awareness of space to a broad range of constituents in every state.

The ISGC specifically supports higher education programs in:

- Life sciences as it applies to astrobiology and advanced life support systems
- Small spacecraft design and operation
- Sustainable systems such as the use of plants in advanced life support systems

- Human factors in aircraft cockpit displays and design
- GIS applications of remote sensing data

PROGRAM BENEFITS TO THE STATE

The ISGC provides competitive scholarships and fellowships to approximately 28 students in member universities. In addition, the higher education programs develop students with applied experience making them more marketable upon graduation. The supporting faculty build collaborations with industry and NASA and thereby become the recipients of further research funding in the state. In addition, ISGC delivers extensive support to formal and informal educators through NASA related science, technology, engineering and math in-service and professional development opportunities across the state.

PROGRAM GOALS

The mission of the ISGC is to coordinate and improve Iowa's future in aerospace science and technology and to stimulate aerospace research, education and outreach activities throughout the state. In the most recent past year, the ISGC supported scholarships and fellowships, research at the university level, collaborations for faculty and students at NASA centers, regional space grant technical meetings, and formal and informal precollege educational programming and training.

PROGRAM ACCOMPLISHMENTS

Many of the ISGC programs are ongoing from year to year as with the annual scholarship and fellowship competitions at the university, community college and state science fair. Some specific highlights from the research and educational areas include:

- Five Iowa students filled summer internship positions at the NASA Ames Research Center in California including three students from Drake University.
- A new community college scholarship competition was conducted.
- A meeting with NASA Kennedy Space Center researchers took place at Iowa State to discuss the use of plants in advanced life support systems.
- One researcher from Iowa State University has developed the only known chamber to simulate the surface temperature, pressure and chemistry of Venus.
- University of Iowa students presented a lecture entitled "Engineering Careers in Aviation" to over 380 high school students in the Iowa City area. A number of high school students subsequently visited OPL for a closer inspection of what a career in Aerospace engineering may entail.
- In-service training for 12 Iowa educators took place at two NASA Centers (The Goddard Space Flight Center and the Marshall Space Flight Center).
- The ISGC Associate Director for Education also is chair of the Board for the State Science and Technology Fair of Iowa. This year over 450 students participated and over \$75,000 in prizes were awarded.

STUDENT ACCOMPLISHMENTS

- One Drake student performed so well that he was hired by NASA Ames research Center upon graduation.
- A student from the University of Iowa spent eight months at the NASA Ames Research Center, well beyond the traditional ten-week summer internship.