Overview of Grant Funding
Science and Math

Created expressly for

Millersville University of PA

Grants Resource Center
American Association of State Colleges and Universities
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Today’s Grant Topics
(NSF, Departments of Defense, Energy, & Education, NASA, assorted foundations)

- Equipment
- Undergraduate Research
- Teacher Education
- General Foundations
Equipment Grants
National Science Foundation

• **Major Research Instrumentation Program**
  Supports acquisition or development of major state-of-the-art instrumentation for research, research training, & integrated research & education activities. Awards range from $100,000 to $2 million; however, lesser amounts are considered for proposals from non-PhD granting institutions, or for mathematical sciences or social, behavioral, & economic science proposals. *(Deadline: 1/24/08)*

• **Instrument Development**
  Supports infrastructure (instrumentation & facilities) development to promote basic research & education in areas traditionally supported by NSF’s Division of Chemistry. *(Last Deadline: 1/23/07)*
**Instrument Development for Biological Research**
Supports development of substantially improved instrumentation likely to have significant impact on study of biological systems at any level. Proposals aimed at concept or proof-of-concept development for entirely novel instrumentation encouraged. (Last Deadline: 8/25/06)

**Earth Sciences: Instrumentation and Facilities**
Supports requests in all Earth sciences disciplines, including: Acquisition or Upgrade of Research Equipment; Development of New Instrumentation, Analytical Techniques, or Software; Support of National or Regional Multi-User Facilities; and Support of Research Technicians. (Deadline: 3/15/07)
National Science Foundation

• Scientific Computing Research Environments for Math Sciences
  Supports the purchase of computing equipment & provides limited support for professional systems administrators or programmer personnel for research computing needs. Grants intended to support mathematics research projects of high quality that require access to advanced computing resources. (Deadline 1/25 each year)
U.S. Departments of Defense and Energy

- Defense Department’s University Research Instrumentation Program (DURIP)
  Competition open only to U.S. institutions of higher education, with degree granting programs in science, math, and/or engineering. Proposals to purchase instrumentation may request $50,000 to $1,000,000. Projects must be defense-related. Central purpose is to provide equipment to enhance research-related education. (Last Deadline: 9/12/06)

- Used Energy-Related Laboratory Equipment (ERLE) Grant Program
  Awards grants of used energy-related laboratory equipment for use in energy-oriented educational programs in the life, physical, and environmental sciences, technology & engineering. A hold or "freeze" must be placed on equipment desired, & institutions have 30 days to submit an electronic grant application. Application reviews and grant awards will be performed on a first-received, first-qualified basis. (No Deadlines)
Other Equipment Grants

• **Kresge Foundation: Science Initiative Grants**
  Challenge grant program to upgrade & endow scientific instrumentation & laboratories at colleges & universities, teaching hospitals, medical schools, & research institutions. Program supports modernization of classrooms, labs & equipment used for science teaching & research, & is designed to assist a broad range of colleges & universities, not necessarily those with significant research budgets. Grants provide 1/4 of the total project costs. *(No Deadlines)*

• **Intel: University Programs**
  Intel supports research in the areas of: computer applications; platform architecture; communication & building wireless connections; high volume manufacturing research; semiconductor technology; & "systems" (including system hardware & software technologies; infrastructure in support of global computing environments; new computing paradigms & algorithms, & novel & innovative platform prototypes & system ingredients. *(No Deadlines)*
Undergraduate Research Grants
**Course, Curriculum, and Laboratory Improvement**

Emphasizes projects that build on prior work and contribute to the knowledge base of undergraduate STEM education research and practice. In addition, projects should contribute to building a community of scholars who work in related areas of undergraduate education. (Last Deadline: 1/10/07)

**Research in Undergraduate Institutions (RUI) Program**

Supports research and equipment acquisition at predominately undergraduate institutions in all fields of science and engineering. Proposals must describe the impact of expected research on research and training environment of the department. (Deadlines vary across NSF)
**U.S. Departments of Defense and Energy**

- *Awards to Stimulate & Support Undergrad. Research Experiences (ASSURE)*
  Supports undergrad research in DOD-relevant disciplines & is designed to increase the number of high-quality undergrad science & engineering majors who ultimately decide to pursue advanced degrees in these fields. DOD executes the ASSURE program collaboratively with NSF through its Research Experiences for Undergraduates (REU) Sites Program. Proposals submitted to NSF that are recommended for funding through the NSF merit review process will be considered for possible DOD support. *(Last Deadline: 8/17/06)*

- *Faculty and Student Teams Program*
  Faculty from colleges & universities with limited research facilities & those institutions serving populations who are underrepresented in the fields of science, engineering, & technology are encouraged to apply. FaST program will support a team comprised of one faculty member & 2-3 undergraduate students for hands-on research opportunities in DOE national labs during the summer. Faculty member identifies a mutually beneficial research area for collaboration with a laboratory scientist. *(Last Deadline: 2/1/07)*

- *Science Undergraduate Laboratory Internships (SULI)*
  Supports undergraduate training and research internships at 14 DOE labs. Appointments are for 10 weeks for the summer term and 16 weeks for the spring and fall terms. Stipend provides $400/week. *(Last Deadline: 2/1/07)*
• **Langley Aerospace Research Summer Scholars (LARSS) Program**
  Supports undergraduate juniors and seniors and first-year graduate students who are pursuing degrees in aeronautical engineering, mechanical engineering, electrical engineering, materials science, computer science, atmospheric science, astrophysics, physics, chemistry, or selected space disciplines of interest to LaRC. Approximately 150 students are selected each year for a 10-week period of research under the supervision of a NASA mentor. Undergraduate awards provide $4,500 and graduate awards provide $5,000. (Last Deadline: 2/1/07)

• **Undergraduate Student Researchers Program (USRP)**
  Offers rising third- and fourth-year undergraduates mentored research opportunities at 10 participating NASA centers. Eligibility is limited to US citizens who have a minimum GPA of 3.0 and are concentrating in engineering, mathematics, computer science, or physical/life sciences. Students receive $5K for 10-week summer session or $7,500 for 15-week fall session, plus travel. (Deadline: 2/28/07)
Other Undergraduate Research Grants

• **Summer Support for Exceptional Undergraduates (NCUR/Lancy Initiative)**
  Provides up to $40,000/year one & $22,500/year two) to allow exceptional undergrads to conduct original research in collaboration with faculty mentors. Successful applications will have a cadre of interdisciplinary faculty with the time, energy, & interest to supervise up to 8 undergrads for a period of 8-10 wks during the summer, & an administrative support structure that will nurture this activity. *(Last Deadline: 8/15/06)*

• **Graduate & Undergraduate Student Research Grants/Geological Society of America**
  Supports college students for masters & doctoral thesis research in any earth science area. Undergraduate Student Research Grants are available in the following GSA regions: Northeastern; North-Central; South-Central; & Southeastern. Student Travel Grants also are available. Applicants must be GSA members. *(Deadlines vary)*
Other Undergraduate Research Grants

• Petroleum Research Fund Programs/American Chemical Society
  Supports fundamental research in chemistry, earth sciences, chemical engineering, and fields such as polymers and materials science that are directly related to petroleum. Accepts proposals for various award types, including Graduate & Undergraduate Department Research, Starter and Undergraduate Faculty Sabbatical Grants, Alternative Energy Postdoctoral Fellowships, Summer Schools Grants; and Summer Research Fellowships, which support faculty guest researchers from non-doctoral institutions. (Deadlines: 3/30/07; 8/3/07; 11/30/07)

• American Association for the Advancement of Science Merck/AAAS Undergraduate Science Research Program
  Supports research stipends for undergraduate students and ancillary programs that foster interactions between biology and chemistry departments. The program goals are to: enhance undergraduate education through research experiences that emphasize the interrelationship between chemistry & biology; encourage students to pursue graduate education in chemistry and life sciences; and foster undergraduate programs and activities that bridge chemistry and biology. (last deadline: 11/3/06)
Teacher Education Grants
• **Advanced Technological Education**
  Focuses on education of technicians for high-tech fields. Involves partnerships (2-year & 4-year colleges) between academic institutions and employers to promote improvement in education of science and engineering technicians at undergrad and secondary school levels. *(Deadline: 4/26/07)*

• **Robert Noyce Scholarship Program**
  Provides funds to institutions of higher education to support scholarships, stipends, and programs for students who commit to teaching in high need K-12 schools. *(Last Deadline: 4/3/06)*

• **Discovery Research K-12 (DR-K12)**
  Supports research, development, & evaluation activities to improve K-12 learning & teaching. Exploratory & Full-Scale projects are supported in 3 components: Applied Research, Development of Resources & Tools, & Capacity Building. Conferences (also supported. *(Deadlines vary)*
Pre-Service Teacher Program
Supports undergraduate paid internships at a DOE lab for students who have decided on a teaching career in science, math or technology. Students work with scientists or engineers on projects related to the lab's research programs, as well as working with a Master Teacher who is currently working in K-12 education as a teacher. The different labs each offer different research opportunities. Students may select any lab or make a specific laboratory choice when applying. (Last Deadline: 2/1/07)
U.S. Department of Education

• **Mathematics and Science Education Research**
  Supports research that will identify and support new and ongoing interventions in mathematics and science education that improve math achievement for all students and close the achievement gap in these academic areas. There is also a special education version of this program. Awards may be up to $1.2 million. *(Last Deadline: 11/16/06)*

• **Teacher Quality: Math & Science Research**
  Supports projects that identify effective strategies for improving the performance of classroom teachers in ways that increase student learning and school achievement. The program will support research on key issues of teacher quality that are likely to lead to substantial gains in academic achievement for all students and particularly minority and economically disadvantaged students. There is also a special education version of this program. Awards up to $1.2 million. *(Last Deadline: 11/16/06)*

• **Graduate Assistance in Areas of National Need (GAANN)**
  Awards grants to academic departments, programs, & other academic units that offer graduate degree courses. Program allows grantees to provide fellowships to graduate students with financial need who plan to teach or conduct research in areas of national need such as biology, chemistry, computer & information science, engineering, geological science, mathematics, nursing & physics. Next competition will be in FY 09. *(Last Deadline: 11/20/06)*
Other Teacher Education Grants

- **Toyota USA Foundation**
  Provides grants for initiatives that impact children through support of pre-college education programs, with an emphasis on improving the teaching & learning of mathematics & science. In the past, partnerships with national nonprofit organizations have included programs that address issues such as family literacy, K-12th grade education, technical & higher education as well as environmental education. *(accepts full proposals at anytime)*

- **Exxon Mobil Foundation**
  Supports undergraduate programs aimed at improving teaching and learning in science, technology, engineering, and mathematics. Program areas include: Matching Gifts; Project NexT; Science; Outreach to Women and Minorities and Other Higher Education Programs. *(accepts full proposals at anytime)*

- **Hewlett-Packard Foundation Technology for Teaching Grant Initiative**
  Supports the innovative use of mobile technology in K-16 education, awarding $10M in cash & HP equipment, including reinvestment for selected projects previously funded. Proposals must focus on redesign of math, science (life sciences, physical sciences, earth sciences, comp. sciences), engineering or business (including M.B.A.) courses. Additional consideration will be given to projects that are submitted by institutions serving individuals from low-income families. *(Last Deadline: 2/15/07)*
General Foundation Grants
General Foundation Grants

• **Dreyfus Foundation Faculty Start-Up Award for Undergraduate Institutions**
  Supports the scholarly activity of new faculty in the chemical sciences at primarily undergrad institutions with a Start-up Award designed to help initiate their research. The award provides an unrestricted research grant of $30,000 and is open to all academic institutions in the U.S. that do not grant a doctoral degree in chemistry, biochemistry or chemical engineering. (Deadline: 5/10/07)

• **Research Corporation Cottrell College Science Awards**
  Supports significant research in non-Ph.D. granting departments of chemistry, physics, and astronomy at both public and private IHEs that will lead to significant contributions to scientific knowledge and enhance undergrad participation in research-oriented teaching programs. Awards provide summer support of about $35,000 over 2 years. (Deadlines: 5/15/07; 11/15/07)

• **Seaver Institute Grants Program**
  Provides seed money to highly regarded organizations for projects that offer the potential for significant advancement in the fields of education, science, medicine, and the arts. The Seaver Institute looks for unique proposals that can change the way people think. No Website is available. Individuals must write a request letter to receive the guidelines and a brochure. (Deadlines: 4/1/07, 11/1/07)
Contact GRC through Millersville’s Grants and Sponsored Research Office

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