The Division of Human Resource Development (HRD), within the Directorate for Education and Human Resources, serves as a focal point for NSF’s agency-wide commitment to enhancing the quality and excellence of science, technology, engineering, and mathematics (STEM) education and research through broadening participation by underrepresented groups and institutions.

HRD’s programs have a strong focus on partnerships and collaborations in order to maximize the preparation of a well-trained scientific and instructional workforce. The programs are aligned with their respective target populations:

- Minorities and Minority-Serving Institutions
- Women and Girls
- Persons with Disabilities

All HRD programming seeks to encourage access to and equity within STEM education. Thematically, these goals are realized via:

- Education Research and Demonstration;
- Enhancement of Institutional Education Capacity;
- Enhancement of Institutional Research Capacity;
- Large-scale Implementation; and
- Recognition and Dissemination.

### HRD Programs According to Theme and Population

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Minorities and Minority-Serving Institutions

The Louis Stokes Alliances for Minority Participation (LSAMP) Program
http://www.ehr.nsf.gov/ehr/hrd/amp.asp
YEAR BEGUN: FY 1991  NUMBER OF AWARDS: 32
TARGET AUDIENCE: undergraduates, faculty, research and industry
LSAMP develops comprehensive strategies to strengthen the preparation and production of underrepresented minority students completing baccalaureate degrees in STEM. The long-term goal is to increase the production of minority Ph.D.s with an emphasis on the professoriate. LSAMP awardees demonstrate strong partnerships among academic institutions, government agencies and laboratories, industry, and professional organizations.

Centers of Research Excellence in Science and Technology (CREST)
http://www.ehr.nsf.gov/ehr/hrd/Crest.asp
YEAR BEGUN: FY 1987  NUMBER OF AWARDS: 16
TARGET AUDIENCE: undergraduates, faculty, researchers
CREST makes resources available to upgrade the research capabilities of minority-serving institutions. The Centers promote the production of new knowledge, increase the research productivity of individual faculty, and expand a diverse student presence in all STEM disciplines.

Alliances for Graduate Education and the Professoriate (AGEP)
http://www.ehr.nsf.gov/ehr/hrd/agep.asp
YEAR BEGUN: FY 1998  NUMBER OF AWARDS: 20
TARGET AUDIENCE: graduate students, faculty
AGEP seeks to increase significantly the number of Black, Hispanic, and American Indian/Alaskan Native students pursuing advanced study, receiving doctoral degrees in science, mathematics, and engineering, and the number of minorities who will enter the professoriate as role models and mentors.

Historically Black Colleges and Universities Undergraduate Program (HBCU-UP)
http://www.ehr.nsf.gov/ehr/hrd/hbcu.asp
YEAR BEGUN: FY 1998  NUMBER OF AWARDS: 30
TARGET AUDIENCE: undergraduates, educators, researchers
HBCU-UP seeks to enhance the quality of undergraduate education at HBCUs as a means to broaden participation of underrepresented minorities in the Nation’s STEM workforce. Typical mechanisms include course and curriculum reform, faculty development, supervised research, and other active-learning experiences for STEM undergraduates.

Tribal Colleges and Universities Program (TCUP)
http://www.ehr.nsf.gov/ehr/hrd/tcup.asp
YEAR BEGUN: FY 2000  NUMBER OF AWARDS: 17
TARGET AUDIENCE: Tribal Colleges and Universities, Alaskan Native-serving institutions and Native Hawaiian-serving institutions
TCUP awards support comprehensive institutional approaches to strengthen teaching, learning, and community outreach in ways that improve access to, retention within, and graduation from STEM programs. Particular emphasis is placed on the leveraged use of information technologies.
Women and Girls

Program for Gender Equity in Science, Mathematics, Engineering and Technology (PGE)
http://www.ehr.nsf.gov/ehr/hrd/pge.asp
YEAR BEGUN: FY 1992  NUMBER OF AWARDS: 250
TARGET AUDIENCE: K-12, college and university students, educators, counselors, families, support groups, informal science audiences.

PGE seeks to broaden the participation of girls and young women in STEM through research and innovation in education. Project outcomes offer proven solutions for increasing the interest, retention, and achievement of girls and women and for implementing strategic student-enrichment resources including mentoring.

Persons with Disabilities

Program for Persons with Disabilities (PPD)
http://www.ehr.nsf.gov/ehr/hrd/ppd.asp
YEAR BEGUN: FY 1992  NUMBER OF AWARDS: 91
TARGET AUDIENCE: K-12, college and university students, educators, counselors, families, support groups, informal science audiences.

PPD promotes the participation of students with disabilities in STEM education leading to their increased representation within the Nation’s workforce. PPD supports projects that develop techniques for teaching science and mathematics to students of all abilities, increase awareness of the needs and capabilities of students with disabilities, promote the accessibility of instructional materials and learning technologies, and increase the availability of mentoring resources.

Crosscutting Activities

Presidential Awards for Excellence in Science, Mathematics, and Engineering Mentoring (PAESMEM)
http://www.ehr.nsf.gov/ehr/hrd/paesmem.asp
YEAR BEGUN: FY 1996  NUMBER OF AWARDS: 100
TARGET AUDIENCE: educators, STEM professionals, institutions

The Executive Office of the President of the United States has established PAESMEM to identify and disseminate model practices of outstanding mentoring efforts and programs designed to enhance the participation of groups underrepresented in STEM. The awardees serve as exemplars to their colleagues and are leaders in the national effort to more fully develop the Nation’s human resources in science, mathematics, and engineering.

“A diverse, internationally competitive and globally engaged workforce of scientists, engineers, and well-prepared citizens.”

PEOPLE Goal
NSF Strategic Plan FY 2000-2005
HRD Projects
Information about past and ongoing projects supported by HRD programs can be browsed at the following URLs:

**AGEP**
- Project Directors
  - [http://www.ehr.nsf.gov/ehr/hrd/hrddirlist.asp#AGEP](http://www.ehr.nsf.gov/ehr/hrd/hrddirlist.asp#AGEP)

**CREST**
- Project Directors
  - [http://www.ehr.nsf.gov/ehr/hrd/hrddirlist.asp#CREST](http://www.ehr.nsf.gov/ehr/hrd/hrddirlist.asp#CREST)

**HBCU-UP**
- Project Directors
  - [http://www.ehr.nsf.gov/ehr/hrd/hrddirlist.asp#HBCUUP](http://www.ehr.nsf.gov/ehr/hrd/hrddirlist.asp#HBCUUP)

**LSAMP**
- Project Directors
  - [http://www.ehr.nsf.gov/ehr/hrd/hrddirlist.asp#LSAMP](http://www.ehr.nsf.gov/ehr/hrd/hrddirlist.asp#LSAMP)

**PAESMEM**
- Awardees

**PGE**
- Project Directors

**PPD**
- Principal Investigators

**TCUP**
- Project Directors

Other Programs of Interest
In addition to the following web sites, information about all NSF programs is compiled annually into the Guide to Programs ([http://www.nsf.gov/cgi-bin/getpub?gp](http://www.nsf.gov/cgi-bin/getpub?gp)). Updates and supplements by program announcements and solicitations may also be found at:

- [Other NSF Programs Supporting Diversity in Education & Research](http://www.ehr.nsf.gov/ehr/hrd/ofund.asp)
- [Crosscutting or Interdisciplinary NSF Programs and Activities](http://www.nsf.gov/home/crssprgm/)
- [Other NSF Funding Opportunities for STEM Education](http://www.ehr.nsf.gov/ehr/dues/links/other_programs.asp)

HRD Projects

Other Programs of Interest

Other NSF Programs Supporting Diversity in Education & Research

Crosscutting or Interdisciplinary NSF Programs and Activities

Other NSF Funding Opportunities for STEM Education

Elementary, Secondary and Informal Education

Undergraduate Education

Graduate Education

National Science Foundation
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