

**Access to and Diversity in STEM Fields:
An American Association for the Advancement of Science Law and Policy Initiative**

Project Overview

Higher education, particularly in the fields of science, technology, engineering and mathematics, plays a critical role by increasing basic knowledge and generating a well-trained workforce on which industry and government depend. Whatever one's politics may be, for the good and prosperity of all society, higher education must prevail in its goal of increasing access for minorities to education at all levels and in all fields, but particularly in STEM fields.

*--Diversity Handbook
(AAAS, 2010)*

The AAAS is pleased to announce the continuation and expansion of its 2009-2010 national initiative focused on enhancing diversity in science, technology, engineering and math [STEM] disciplines, with participation by the Association of American Universities. With a focus on faculty and student access and diversity issues, phase two of this national initiative will provide policy and legal resources to institutional leaders and their counsel to help them succeed in meeting STEM-related 21st Century educational goals.*

With a policy and programmatic focus, as well as in-depth legal analysis and guidance tied to program models, this second phase of work will provide higher education institutions with foundations for pursuing key strategies and developing approaches that can be successful because they are both effective *and* legally sustainable.

With funding from the National Science Foundation, the second phase of this initiative will offer resources and solutions for undergraduate-serving institutions and graduate-serving research institutions. Broadly, this initiative will address the intersecting issues of access and diversity, with a focus on the following questions:

* This initiative is a culmination of several AAAS initiatives. In 2008, top executives from Fortune 50 companies and senior representatives of government agencies, the National Academy of Engineering, and research universities convened at an AAAS and NACME-sponsored round-table and posed the central question regarding how the nation's research universities could better work within existing legal constraints to increase the diversity of their STEM faculties and student bodies. Considering national demographics and national and international education trends, these leaders urged that the United States do more to educate and employ more minorities and women in STEM fields, or risk consequential adverse effects on U.S. economic strength and national security (www.aaascapacity.org/). To begin to address that question, AAAS and AAU in 2009 and 2010 sponsored two national workshops and the AAAS published *Handbook on Diversity and the Law: Navigating a Complex Landscape to Foster Greater Faculty and Student Diversity in Higher Education* (Keith and Coleman, eds., 2010) available at: <http://php.aaas.org/programs/centers/capacity/publications/complexlandscape/PDFs/LawDiversityBook.pdf> and the *Handbook's Summary and Highlights (2011)* available at http://php.aaas.org/programs/centers/capacity/documents/LawDiversity_SUMMARY.pdf. As with the prior work in this and other AAAS initiatives, guidance developed in this project will be useful in STEM as well as other fields.

- ◆ **Access:** How four-year undergraduate-serving colleges and graduate-serving academic research institutions can work together with others (including two- and four-year colleges) to systemically address K-12 STEM achievement gaps among non-Asian minority and low-income students and increase their access to STEM higher education; and to help reverse the trend of declining participation of women in most STEM fields while increasing access to STEM higher education and careers for women and minorities who are underrepresented in STEM higher education and careers.
- ◆ **Student and faculty diversity and inclusion:** How colleges and universities can enhance their diversity efforts (including a focus on issues of race, national origin, and gender, as well as on low income, first generation, and foreign students) in ways designed to achieve comprehensive, sustained, and inclusive change.

Areas of Policy and Legal Guidance

Specific areas of policy, program and legal guidance will include:

1. **Legal analysis regarding race- and gender-conscious practices.** Issues of federal and state non-discrimination law are central when higher education institutions pursue race-, ethnicity-, and gender-conscious enrollment and hiring strategies. Thus, the in-depth legal analysis related to student enrollment and faculty hiring decisions developed during phase one of this project will serve as the foundation for policy- and program-focused legal analysis—including analysis relevant to a wide range of higher education institutions.
2. **Policies and agreements to facilitate undergraduate transitions.** Postsecondary policies that facilitate and enhance postsecondary options for students can serve as powerful tools (and legally, as race/ethnicity- and sex-neutral strategies) for pursuing successful access and completion efforts in the STEM fields. This paper will serve as guidance on policies and collaboration agreements among institutions of higher education (specifically, education collaborative agreements, 3+2 programs, and recruitment consortia) with several aims: expanding the reach of colleges and universities to talented students; empowering students to pursue and complete degrees in STEM programs; and expanding student awareness of education and career paths. This paper will center on agreements among specific institutions (rather than government regulations and policies), developing institution-specific guidance that can aid appropriate and more seamless student opportunities, transitions, and recruitment within and among institutions. Considerations for joint degree programs, recognition of credits, or other strategies for students pursuing STEM majors will be addressed.
3. **Inclusive and neutral strategies.** The identification and pursuit of effective race- and gender- neutral approaches can support critical institutional educational and research goals, create a more inclusive campus community, and have the ancillary benefit of significantly

increasing the participation of underrepresented minorities and women on the faculty and in student bodies. An understanding of these issues is also extremely important in the states where state law limits (pursuant to voter ballot initiatives and executive orders) affect the consideration of race, ethnicity, and gender in public higher education enrollment and hiring otherwise permitted under federal law. Key points of focus in this area will include:

- ◆ The meaning of "conduct of inclusion" and use of "multi-cultural skills" in the classroom, research laboratory, and other work- and education-related contexts; and how to measure such conduct and skill to achieve institutional goals.
- ◆ Analysis of specific strategies (including those found at non-research and research colleges and universities) for enhancing diversity and access within the faculty and (at research universities) postdoctoral populations in light of the decentralized nature of faculty and postdoctoral selection processes.
- ◆ The identification and promulgation of good faculty search and robust outreach practices that increase opportunities to enhance diversity, while minimizing legal risk.
- ◆ Key issues associated with defining "merit," including with respect to the development of faculty position descriptions and search approaches that reject unnecessarily limited definitions of qualification.
- ◆ Strategies for establishing a more welcoming and inclusive campus community for students and faculty reflective of broad diversity, as well as increasing the participation of minorities and women on the faculty.

Several publications and practical tools (policies, procedures, and templates) to be produced in 2011 will address the above issues. In addition, a publication that will identify and translate for lay and judicial audiences existing research that supports the importance of a diverse faculty and student body for educational and research outcomes in STEM fields will be developed.



Two, two-day national workshops, scheduled for the fall and the winter of 2011, will address critical access and diversity issues and program models most frequently used within institutions that have undergraduate and graduate programs and significant research agendas, as well as those that are undergraduate-focused. This will be accomplished through a combination of plenary sessions and institution- and issue-focused break out sessions.

Supporting Organizations and Project Management

AAAS will lead this initiative with the participation of several national organizations that serve a wide range of higher education institutions, including: The American Council on Education, the Association of American Medical Colleges, the National Association of College and University Attorneys, the College Board, the American Association of Community Colleges, the Institute for Higher Education Policy, the Thurgood Marshall College Fund, the Association of Public and Land-Grant Universities, and the primary funder of phase one of the project, the Alfred P. Sloan Foundation. The Association of American Universities continues as an inaugural participant.

Project leadership will be provided by Dr. Daryl Chubin, Director of the AAAS Center for Advancing Science & Engineering Capacity, and Jamie Lewis Keith, Vice President and General Counsel of the University of Florida, both Co-Project Directors; and Art Coleman, Managing Partner of EducationCounsel LLC, Project Counsel. Dr. Shirley M. Malcom, Head, Education and Human Resources Programs, AAAS, will supply policy advice. An advisory board, co-chaired by Bob Burgoyne and Columbia Law School Professor Theodore Shaw of Fulbright and Jaworski, LLP, will offer overall expert input and guidance. EducationCounsel LLC will provide policy, legal, and overall support for the project.

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