APPENDIX V: Additional Resource Materials

Other Legal Resources


Office of the Attorney Gen’l of Maryland, “Strengthening Diversity in Maryland Colleges and Universities: A Legal Roadmap,” at Ch. 3 (“Faculty and Staff Diversity”) (March 2009)


A. L. Coleman, S. R. Palmer, & S. Y. Winnick, “Roadmap to Diversity: Key Legal and Educational Policy Foundations for Medical Schools” (Association of American Medical Colleges 2008)


Books


Institute of Medicine, “In the Nation’s Compelling Interest: Ensuring Diversity in the Health Care Workforce” (2004) (available at www.nap.edu)
Reports and Journal Articles


“Effective Strategies to Diversify STEM Faculty” (2007) (developed under NSF grant HDR#043607) (available at www.epst.org/diversity/diversity1.ppt)


U.S. Gov’t Accountability Office, “Gender Issues: Women’s Participation in the Sciences Has Increased, but Agencies Need to Do More to Ensure Compliance with Title IX,” GAO-04-639 (July 2004)

President’s Council of Advisors on Science and Technology, Workforce/Education Subcommittee, “Maintaining the Strength of Our Science and Engineering Capabilities” (June 2004) (available at www.ostp.gov/pcast)


D. Smith, “How to Diversify the Faculty,” 86 Academe 48 (Sep.-Oct. 2000)


Law Review Articles


NACUA Materials

A. Springer, “Achieving a Diverse Faculty: Law and Policy” (March 2006)

J. Alger, “As the Workplace Turns: Affirmative Action in Employment” (Fall 2005)


Literature on Exclusion of Girls, Women, and Minorities from STEM Education


**Data/Research**


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Articles Relating to States/Universities


APPENDIX VI: Government, Diversity-Related, Journal, Media and Other Websites

Government Websites

EEOC: www.eeoc.gov
National Science Foundation: www.nsf.gov
OFCCP: www.dol.gov/esa/ofccp/
U.S. Department of Justice, Civil Rights Division: www.usdoj.gov/crt/

Diversity-Related Websites

American Association for Affirmative Action: www.affirmativeaction.org
Americans for a Fair Chance: www.fairchance.civilrights.org
Commission on Professionals in Science and Technology: www.cpst.org/div-pres.cfm
Compact for Faculty Diversity: www.instituteon teachingandmentoring.org
Diversityweb: www.diversityweb.org
Equal Justice Society: www.equal justicesociety.org
National Consortium for Graduate Degrees for Minorities on Engineering and Science: www.gemfellowship.org
National Organization for Women: www.now.org/issues/affirm/
National Postdoctoral Association: www.nationalpostdoc.org
Society of American Law Teachers: www.saltlaw.org/affaction.htm
University of Michigan: www.umich.edu/~urel/admissions/
Journal and Other Media Websites


Bulletin of Science, Technology & Society:  http://bst.sagepub.com/

Chemical & Engineering News:  http://pubs.acs.org/cen/


Educational Researcher:  http://er.aera.net/

Inside Higher Ed:  http://www.insidehighered.com/

Journal of Educational and Behavioral Statistics:  http://jebs.aera.net/


Journal of Women and Minorities in Science and Engineering:  http://www.begellhouse.com/journals/00551c876cc2f027.html

Physics Today:  http://www.physicstoday.org/

Review of Educational Research:  http://rer.aera.net/

Review of Research in Education:  http://rre.aera.net/

Science  http://www.sciencemag.org/

Science Communication:  http://scx.sagepub.com/

Teachers College Record:  http://www.tcrecord.org/

Other Websites

Alliance for Graduate Education and the Professoriate:  www.agep.us

American Association for the Advancement of Science:  www.aaas.org

American Association of University Professors:  www.aaup.org
American Association for the Advancement of Science Center for Advancing Science & Engineering Capacity:  www.aaascapacity.org

American Association of University Women:  www.aauw.org

American Council of Engineering Companies:  http://www.acec.org

American Institute of Physics:  http://www.aip.org/

American Society for Engineering Education:  www.asee.org

Association for Women in Mathematics:  http://www.awm-math.org

Benjamin Banneker Institute for Science and Technology:  http://www.thebannekerinstitute.org/

Black Engineer:  http://www.blackengineer.com


California Council on Science and Technology (CCST):  http://www.ccst.us/

Consortium of Social Science Association (COSSA):  http://www.cossa.org/

Converge—Together Building Change (Harvard Medical School):  http://staging.convergeresearch.hms.harvard.edu/


The Leadership Alliance:  http://www.theleadershipalliance.org/matriarch/default.asp


Understanding Interventions That Broaden Participation in Research Careers: www.understandinginterventions.org

ScienceCareers: http://sciencecareers.sciencemag.org/


APPENDIX VIII: Professional Associations that Facilitate Student and Faculty Recruitment in STEM Disciplines, and Sample Institutional Outreach Plan Form

Professional Associations that Facilitate Student and Faculty Recruitment

Affirmative Action Register http://www.aarjobs.com
Alliance for Graduate Education and the Professoriate: www.agep.us
American Indian Science and Engineering Society (AISES) http://www.aises.org
American Youth Policy Forum (AYPF)
Association for Women in Science (AWIS) http://www.awis.org
American Association of University Women http://www.aauw.org/About/career
Catalyst—Expanding Opportunities for Women and Business http://www.catalyst.org/
Diverse Jobs http://www.diversejobs.net/
DiversityWeb http://www.diversityweb.org/
Hispanic Outlook in Higher Education http://www.hispanicoutlook.com/
Education Trust
Educational Policy Institute
Equal Opportunity/Diversity http://www.hrs.iastate.edu/AAO/Outreach/Outreach.shtml
Human Resource Services http://www.hrs.iastate.edu/r&e/outreach_contents.shtml
JustGarciaHill (JGH)
Mathematics, Engineering, Science Achievement (MESA)
MentorNet: The E-Mentoring Network for Diversity in Engineering and Science
National Action Council for Minorities in Engineering (NACME)
National Consortium for Continuous Improvement in Higher Education
National Postdoctoral Association
National Society of Black Engineers (NSBE) http://national.nsbe.org/Default.aspx?tabid=106
Pathways to Science: www.pathwaystoscience.org
Professional Science Masters
Society of Women Engineers (SWE) http://www.swe.org
Society of Hispanic Professional Engineers http://onesphe.shpe.org/wps/portal/national
Society for Advancement of Chicanos and Native Americans in Science http://www.sacnas.org
Southern Regional Education Board http://www.sreb.org/
U.S. Commission on Civil Rights
Women in Engineering ProActive Network (WEPAN)
Women in Higher Education http://www.wihe.com/$spindb.query.indexmain.wihe
For an example of institution-specific materials, see:

Hispanic-serving colleges/universities:  
http://www.psu.edu/dept/aaoffice/hispanic_universities.html
Historically/predominantly black colleges/universities:  
http://www.psu.edu/dept/aaoffice/aa_universities.html
Tribal-serving colleges/universities:  http://www.psu.edu/dept/aaoffice/tribal_universities.html
Women’s colleges/universities:  http://www.psu.edu/dept/aaoffice/women_universities.html

Source:  Penn State University Affirmative Action Office,  
http://www.psu.edu/dept/aaoffice/
Sample Institutional Outreach Plan Form

Following signoff on all applicable checklist categories, please email/send a copy of the completed form to the cognizant Dean for certification of adequacy before closing the application period or finalizing any list of candidates to be interviewed. Send copies to the Department Chair and Associate Provost.

**Completion Checklist**

1) **Advertise in journals, organizations and websites.**
   a) General: 
   
   b) Diversity Specific:

2) **Consult relevant publication lists and databases.**
   a) General: 
   
   b) Diversity Specific:

3) **Consult with University faculty members** (attach any letter/e-mail sent).
   a) List Minority/Women Faculty: 
   
   b) List Other Faculty:

Department Chair and Associate Provost.
4) Contact colleagues elsewhere (attach any letter/e-mail sent).
   a) **List Minority/Women Faculty:**

   b) **List Other Faculty:**

5) Contact dept. alums and post docs (attach letter/e-mail sent).
   a) **List Minority/Women Alums:**

   b) **List Other Alums:**

6) Contact dept. chairs at relevant universities (attach any letter/e-mail sent).
   a) **Top URM Producers (including HBCUs, Hispanic-serving, Tribal):**

   b) **Other Universities:**

7) Other.
   a) **General:**

   b) **Diversity Specific:**
APPENDIX IX: Testimonials from U.S. Leaders in Support of Diversity in STEM Fields

“Unless we maintain our edge in innovation through a strong science and technology enterprise, the best jobs may soon be found overseas, instead of in our communities.”

Bart Gordon (D-TN)
House Science & Technology Committee Chairman

* * * * *

“Universities are a key component of the innovation ecosystem, because they educate the workforce of the future — particularly in science and engineering. But universities must meet students where they are, getting them engaged in research, and multidisciplinary teams, working on the important problems of the day, and encouraging them to exploit their creativity not only in the commercial realm, but, also, through social entrepreneurship. . . .

The government has a somewhat different role to play. It should focus on skills training of workers for new enterprises, financial incentives for workers in transition, financial support for university-level students, and support for basic research in universities.

Many corporate executives and national studies have decried the lack of U.S. national investment in research, and in teaching young people mathematics and science. Many also agree that talent and ideas know no boundaries — that talent can and should be accessed globally, and that it is important to commercialize, and to diffuse and use inventions through business innovation — whatever their origin. Because talent and innovation are global, some corporations, especially multinationals, have created global research networks to tap talent, ideas, and markets — globally. Nonetheless, most also agree that in order to increase the technological sophistication of workers, and to support the overall development of human capital, it is important to develop indigenous talent, and to attract international talent — in order to create the intellectual cauldron from which innovation really springs.

In the U.S., our vital, valuable science and engineering workforce is threatened because our current cohort of scientists and engineers are retiring, and we are no longer producing sufficient numbers of new graduates to replace them. Although we continue to attract talented international scientists, engineers, and students, we are in an increasingly fierce global competition for this talent. We do not hold on to them as much as we did in the past, because other nations now have more educational and career opportunities for talented scientists and engineers — from everywhere.

Our own demographics have shifted. Our “new majority” now comprises young women and racial and ethnic groups traditionally underrepresented in advanced science and engineering schools. This is what I have called the “Quiet Crisis” — “quiet” because it unfolds so gradually, a “crisis” because a human capital deficit can hinder our national, even international, innovation capacity. If we are to develop indigenous talent, we, also, must develop and tap this resource.”
“The National Academies’ *Gathering Storm* report offers twenty specific actions to help revise the current trends. The two highest priority actions are to graduate 10,000 new teachers each year with primary degrees in math or science, and to double real federal investment in fundamental research within seven years.

What has happened since these recommendations were made and the needed Authorizing legislation passed overwhelmingly in both the House and Senate? Well, a new research university was established with an opening day endowment equal to MIT’s after 142 years; next year over 200,000 students will study abroad, mostly pursuing science or engineering degrees, often under government-provided scholarships; government investment in R&D is set to increase by 25 percent; an initiative is underway to make the country a global nanotechnology hub; an additional $10B is being devoted to K-12 education, with emphasis on math and science; the world’s most powerful particle accelerator will soon begin operation; a $3B add-on to the nation’s research budget is being implemented; and a follow-on to the Gathering Storm study has been completed.

These actions are, of course, taking place in Saudi Arabia, China, the U.K., India, Brazil, Switzerland, Russia and Australia, respectively.

Meanwhile, in the United States, prior to the current economic crisis, one premier national laboratory announced the imposition of two-day a month “unpaid holidays” on its science staff; several laboratories began laying-off researchers; the U.S. portion of the international program to develop plentiful energy through nuclear fusion was reduced to “survival mode”; America’s firms continued to spend three times more on litigation than research; and many young would-be scientists presumably began reconsidering their careers.

. . . We cannot continue to live off past investments, investments such as those that were made when the need for a better educated populace led to the creation of Land Grant Institutions; when the collapsing economy in the Great Depression prompted a huge civil works program; when the aftermath of World War II led to the G.I. Bill; when the shock of Sputnik triggered significant reinvestment in education and science. Unfortunately, the threat we now face offers no sudden wake-up call: no Pearl Harbor, no Sputnik, no 9/11.

Today's young adult generation of Americans is the first in memory, perhaps in history, to be less well educated than their parents. Absent decisive action on our parts today’s children are likely to be the first ever to have a lower sustained standard of living than their parents. The
stimulus package now being addressed will hopefully help the present generations, but it needs to be accompanied by an investment on behalf of our children.”

Norman R. Augustine  
Retired Chairman and Chief Executive Officer  
Lockheed Martin Corporation  
Testimony before Democratic Steering and Policy Committee  
U.S. House of Representatives  
January 7, 2009  
www.aau.edu/WorkArea/showcontent.aspx?id=8154

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“Why should anyone care about the results in the Rising Above the Gathering Storm report? Because they reconfirm that in the many calls for immediate, strong, and broad action to address these problems, too little attention has been given to a solution near at hand. The answer to the problem lives next door, around the block, or across town. Increasing the presence of underrepresented minority Americans in the study of STEM disciplines must be a primary part of the ultimate solution to the problem of the United States’ endangered competitiveness... Finally, we need to be mindful of the words of Supreme Court Justice Sandra Day O’Connor, who said, ‘In order to cultivate a set of leaders with legitimacy in the eyes of the citizenry, it is necessary that the path to leadership be widely open to talented and qualified individuals of every race and ethnicity.’”

John Brooks Slaughter  
President and CEO, NACME, Inc.  
January 2008

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“Schools with a high proportion of minority students have the least qualified teachers and the fewest tools to work with. That has to change. It has to change not because we would like it to change, and not even because we want equal rights. It has to change because those children are the future of this country and its survival…. This is our war for today — right here on our shores — to educate our young people.”

Eddie Bernice Johnson,  
U.S. Representative from Texas  
Rising Above the Gathering Storm: Two Years Later, 2009  

* * * * *

“The future is dependent on the education of the workforce, but we don't spend enough time investing in education, incentivizing investment. The lack of a research and development (R&D) tax credit is very revealing. Our government refuses to acknowledge that investing in R&D for the future is important.”
Craig Barrett  
**Former Chief Executive Officer, Intel Corp.**  
**August 19, 2008**  

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“My company looks at the STEM problem from a national security perspective. America did not win World War II because we were smarter, but because we had greater production capacity. In the Cold War, our adversaries could not compete with our intellectual capital. Today we are in a different environment, fighting a more challenging foe. Our advantage is all rooted in STEM. We need to battle to inspire youth to undertake these skills. Kids in other countries are making the sacrifice to study science and engineering. We need to leave no source of potential talent behind, but the talent pool of minorities is underutilized.”

Ronald Sugar  
**Chairman and CEO, Northrop Grumman**  
**January 2008**

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“We are incredibly concerned about the lack of attention to STEM. The pool of STEM talent we have from which to hire is simply not large enough. We are going to be an innovation society and we need STEM talent to achieve that. Diversity may be the trump card, though. We are going to run out of talent unless we get more women and underrepresented minorities going to college to study STEM.”

Nicholas Donofrio  
**Executive Vice President of Innovation and Technology, IBM**  
**January 2008**

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“We have a comparative advantage on the world stage. We still have the most innovative nation on this planet; we have a strong science and technology base built over many years; we have a free market and an entrepreneurial economy; and we built all this on a substrate of democracy and a diverse population. If we get our act together, nobody can beat us at this game. But that means we have to consciously as a nation invest in the things that will allow our people to build on our advantage.”
“A nation’s most strategic resource is the strength of its scientific workforce. It is imperative that the entire scientific community coalesce around a quantifiable and shared rationale for rebalancing the base domestic federal research budget beyond the one-time stimulus package.”

Elias Zerhouni
Former Director, National Institutes of Health
http://www.sciencemag.org/cgi/content/summary/323/5917/983

“The annual Top 50 Companies for Diversity listing, now in its eighth year, is an editorial process, entirely driven by metrics obtained in a detailed survey. Companies ranked in the listing demonstrate consistent strength in four areas: CEO Commitment, Human Capital, Corporate and Organizational Communications, and Supplier Diversity. . . . The Top 50 hire 44 percent Blacks, Latinos, Asians and Native Americans, up from 33 percent five years ago. By comparison, the U.S. work force is 29 percent Black, Latino, Asian and Native American, the same level it was three years ago. Twenty-five percent of managers in the Top 50 are Black, Latino, Asian or Native American, compared with 19 percent five years ago. The U.S. work force has 17 percent managers from these groups, compared with 15 percent five years ago.

Although Top 50 companies employ only 5 percent of the U.S. work force, they employ 17 percent of the college-educated Black, Latino, Asian and Native American workers. Top 50 boards of directors are 23 percent Black, Latino, Asian and Native American, compared with 13 percent nationally. Top 50 boards are 22 percent female, compared with 15 percent nationally.

What's the difference globally, where representation by race/ethnicity isn’t usually measured? Top 50 companies average 48 percent of their revenue outside the United States, compared with 38.5 percent five years ago. Almost 20 percent of the Top 50 refuse to do business in countries that don't have the same human-rights values. By comparison, only 5 percent of U.S.-based companies have strong global human-rights policies, according to Ethical Investment Research.…

A total of 352 companies participated this year, up 10 percent from last year and up 100 percent since 2003. . . . The DiversityInc Top 50 Companies for Diversity list is determined entirely by a statistical analysis of responses to our 200-question survey. The survey is sent to any company requesting it that has more than 1,000 employees. There is no fee to enter and no requirement to advertise.”
“Some people make the argument that education is an economic issue. Our students need to compete with students from other countries. And that’s all right with me. If we have to make that argument to get the public funds we need to rebuild our schools, we should do it. But to me, education is more fundamental than a question of American competitiveness or security. It is based on our shared social responsibility to make sure that every young person has an equal opportunity to be successful in life. That, in my mind, ought to be enough for us to make the changes our present conditions require.”

William H. Gates, Sr.
Co-Chair, Bill and Melinda Gates Foundation, 2008