Diversify, Serve, and Engage
Northwestern University’s Blueprint for Graduate Education
TGS Plan 2013-2018
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Diversify, Serve, and Engage
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2013-2018

Since becoming Dean of The Graduate School & Associate Provost for Graduate Education, I’ve had the opportunity to hear the concerns and ideas of our excellent staff in The Graduate School (TGS), our partner school deans, faculty on the TGS Administrative Board, faculty graduate program directors, members of the central administration, graduate program staff, numerous graduate students and postdoctoral fellows, and TGS alumni. These conversations have been extremely valuable and constructive and I deeply appreciate the time and energy that members of our community have been willing to spend sharing their hopes and aspirations for our work in TGS. I’ve also greatly benefitted from meetings, retreats, and conversation with some of these same community members about aspects of the new TGS strategic plan.

Diversity, service, and engagement are left purposefully capacious concepts in this document. We intend them not to be prescriptive, but rather to inspire and inform the work, initiatives, and services of TGS. A strategic plan, in addition to identifying current areas of organizational strength, should also point toward new ways to build on current strengths to better serve our core constituents.

Certain core values are so essential to TGS that they inform every element of individual and institutional practice across all departments and activities. The very best of what TGS can be will be imbued with the values of:

**DIVERSITY** of people, perspectives, and programs to take advantage of the broadest possible pool of talent

**SERVICE** to our core constituencies (students, postdoctoral fellows, faculty, staff, alumni), the institution, our partner schools, and our local community

**COLLABORATION** in problem-solving, innovation, and curricula

**CARING** in all of our relationships with our students, postdoctoral fellows, faculty, staff, alumni, and institutional partners

**OPENNESS** to ideas, broad participation, and ongoing avenues for conversation

The TGS plan also notably supports important goals articulated in the University’s strategic plan. Among them are:
- Discovering new knowledge and encouraging students to put what they learn here to good use
- Connecting with our community
- Growing stronger through the richness of diversity
- Creating connections between programs and people

As friends, partners and constituents of TGS, you can do your part to support this plan by connecting with me and TGS colleagues at any number of our community building events. You can, at any time, provide feedback and ideas for how best to achieve the aspirations expressed in the plan. You are encouraged to participate in mentoring and professional development programming that we sponsor both centrally and in more targeted subject matter areas. We value having you communicate with us through our various social networking outlets, and you may also participate in the work of committees, task forces, and councils to help govern the work and investments of TGS.

Whatever your preferred mode of interaction, I hope that you find something in this plan that excites you and your imagination and makes you want to reach out and become even more involved with TGS. My colleagues and I certainly welcome the opportunity to work with you!

Dwight A. McBride, PhD
Associate Provost & Dean of The Graduate School
Daniel Hale Williams Professor of African American Studies, English, & Performance Studies
Vision

The Graduate School will be recognized at Northwestern and beyond as a leader in the incubation of intellectual and curricular innovation, student-centered programmatic creativity, the fostering of greater student diversity, and the adding of value by our ongoing vigilance about the excellence of graduate education at Northwestern through service to and assessment of our programs.

Mission

The Graduate School of Northwestern University strives to be a visionary, responsive, and trusted leader in promoting the highest quality master’s and doctoral education. TGS’s mission is:

• To collaborate with its partner schools at Northwestern to guide and sustain an institutional culture that facilitates excellence in teaching and mentoring, innovation and rigor in research, and the personal and intellectual growth of its diverse student and postdoctoral fellow populations

• To be an advocate for graduate students and for the critical role of graduate education at Northwestern

• To foster practices and train scholars, thought leaders, and professionals that reflect and respond to the increasing diversity of the U.S. within a rapidly globalizing world

• To address the unique cultural, scientific, and intellectual challenges and opportunities of the academy and our society in the 21st century
Diversity

It is the goal of The Graduate School to cultivate an environment that values diverse backgrounds, approaches, and perspectives: essential ingredients for true academic excellence. Our aim is to become a national leader in diversifying our population of enrolled students, as well as fostering best practices for recruiting, retaining, and encouraging the success of underrepresented minority students.

Diversity Strategy

- Cultivate a university environment that values diverse perspectives, backgrounds, and approaches
  - Provide professionalization and diversity training, acculturation workshops, and a mentoring initiative that prepare faculty to mentor students from diverse backgrounds
  - Responsively recognize complementary research interests among faculty by expanding the type and range of cluster and certificate programs
- Improve the prospective student pipeline, increase percentage of underrepresented minority students in TGS population and raise their retention and graduation rates
  - Increase the number of campus visits both to Northwestern and by Northwestern through TGS outreach efforts, provide personalized follow-up with potential recruits, and build relationships with faculty and key administrators at targeted undergraduate institutions
  - Train faculty to evaluate applications from non-traditional students
  - Dedicate resources to supplement stipends for targeted recruitment, especially in STEM areas and the quantitative social sciences
- Provide for supplementary training when needed to ensure the academic success of students from non-traditional backgrounds
- Create diversified professionalization training, preparing our students for success in a variety of environments
Recent TGS Diversity Initiatives

RICK MCGEE DIVERSITY PRESENTATIONS

In Fall 2011, TGS engaged Dr. Rick McGee, Associate Dean of Faculty Development at the Feinberg School of Medicine, to make presentations to TGS’s admission officers and directors of graduate studies of TGS doctoral programs. These presentations served to lay the foundation for a more holistic approach to recruitment of underrepresented minority students going forward for all TGS programs.

DIVERSITY WORKING GROUPS

In Fall 2011, TGS created working groups to generate strategies to improve the recruitment and enhance the experience of underrepresented minority students. These groups, composed of TGS staff, students, and members of the graduate faculty, submitted proposals for future activities and initiatives, many of which will be used to inform our strategic goals going forward.

STUDENT INTEREST GROUPS HELP STRENGTHEN OUR COMMUNITY

The TGS Community Building Grant program is designed to:

- Bring people together in a social context
- Integrate academic and social aspects of graduate life
- Improve communications and outreach
- Encourage creative expression through the arts
- Serve as a model for community building

Among the more than 25 groups are: Chicago Campus Students of Color Outings, Graduate Christian Fellowship, Graduate Women Across Northwestern, The Graduate Student Cross-Cultural Communication Committee, Advanced Degree Consulting Alliance, Cricket Club, and SPG Improv.
Service

Service is a key component of any successful enterprise. TGS strives to provide the best possible service to all of our stakeholders (students, postdoctoral fellows, faculty, staff members, central administration, partner school leaders, and alumni) by extending current initiatives: mentoring best practices, professional development for students and postdoctoral fellows, and programming for international students. In our role as advocate for graduate students, we will identify and engage with appropriate partners to address process, policy, technology, and infrastructure improvements to better serve our diverse constituents.

Service Strategy

- Optimize competitive advantage of academic programs through research and analysis; interpret markets for academic programs and invest accordingly
  - Ensure both TGS and academic programs are managing resources strategically, maintaining and building strong curricula, and remaining attentive to relevant markets for the placement of our graduates
  - Examine data in annual progress review meetings to advance our programs and our strategic plan, and to learn about and share best practices
  - Catalyze program development that spans schools and disciplines
- Expand the Excellence in Doctoral Mentoring Initiative to improve the experience of faculty, students, postdoctoral fellows, and the outcomes of our programs
- Integrate professional development programming throughout students’ academic careers
  - Create curricula in partnership with Medill and Kellogg that provides PhDs with education to lead, manage, communicate, and strategize
  - Sustain and create further opportunities for students to develop as leaders and professionals via partnerships such as those with the Center for Leadership, Center for Civic Engagement, and the Chicago Humanities Festival
  - Develop opportunities for arts and humanities students to partner with scientists, engineers, and social scientists to address research problems
  - Extend programming and ESL training for international students
  - Ensure language proficiency of all non-native English speakers before graduation and as a marker of satisfactory progress to degree
• Develop and administer flexible academic policies that still ensure accountability of students and programs
  - Ensure strong and where possible annual student milestones to advance improved student outcomes
  - Set expectations and guidelines for students to earn their degree, making the best use of their time and academic resources
  - Implement and administer fair and robust policies to encourage progress
  - Encourage programs to achieve high standards through mentoring, conflict resolution guidelines, and sharing of annual data on student progress

• Develop responsive, strategic, market-driven funding packages for programs
  - Ensure competitive stipend rates and funding packages that include competitive benefits, research accounts, moving expenses, balance of research and teaching, duration of funding, etc.
  - Create incentives for students to pursue and win external awards

• Build service infrastructure around postdoctoral fellows
  - Work with the Vice President for Research and Associate Vice President for Human Resources on policies related to the responsible appointment and training of postdoctoral fellows
  - Deliver effective postdoctoral training programming, including professional development and networking opportunities, in an effort to aid both the faculty mentor and postdoctoral fellow populations
  - Create an advisory board comprised of postdoctoral fellows, faculty members and administrators with a vested interest in postdoctoral training
  - Improve systems for postdoctoral data collection and utilization

• Create flexible allocation models, and provide accessible, actionable data about graduate allocations
  - Offer programs autonomy and information to consume aid resources competitively and creatively; this ensures transparency and improved predictive analytics for TGS and for programs
  - Create budgets sensitive to funding of external agencies

• Provide sustainable structure for training grants
  - Work with Vice President for Research and relevant faculty to identify as early as possible areas of new investment, particularly with regard to federal granting agencies

FACULTY MENTORING INITIATIVE

Research on mentoring doctoral students concludes that advising substantially affects students’ success in academia: advisees are most effective when they feel respected, encouraged, and supported so they can function within the profession (Schlosser, Hill, Knox, and Moskowitz 2003; Schlosser and Gelso 2001). TGS Associate Dean for Academic Affairs Tracy Davis is leading a new TGS/Office of the Provost mentoring initiative, which provides activities, programming and resources for faculty around mentoring. The initiative has created workshops, learning sets, a resource list, and documents on best practices, and will continue to bring new programming and opportunities to faculty through the duration of our strategic plan.

KELLOGG PROGRAM NOW OFFERED TO POSTDOCTORAL FELLOWS

In 2011-12, The Graduate School and the Kellogg School of Management provided a select number of postdoctoral fellows with the opportunity to participate in Kellogg’s Business for Scientists Executive Education Program. Another program, Management for Scientists and Engineers, is offered to graduate students during the Summer quarter (read more about this program, as well as a student snapshot on page 16).

The Business for Scientists Executive Education Program offered eight postdoctoral fellows the opportunity to participate in this five-day certificate program which introduces business concepts, industry-specific tools, finance, and management.

This unique opportunity is just the beginning of the programming being developed for Northwestern’s postdoctoral fellow population in order to augment the exceptional research training they receive while at the University. Current and future efforts will continue to create a collaborative and welcoming environment for postdoctoral fellows.
Engagement

Fostering connections in our community is integral to engagement. An engaged community is a productive and collaborative community. Through partnership with institutions locally, domestically, and internationally, we will provide stellar research and educational opportunities for undergraduate students, graduate students and postdoctoral fellows. We will revisit the meaning of membership in the graduate faculty, engaging them more fully in the holistic pedagogies of graduate education, and investing in the roles they play within our community. Moreover, we will provide opportunities for alumni engagement: helping past students to reconnect meaningfully with current students, the University, and with one another.

Engagement Strategy

- Build compelling networks for engagement that help recruit and retain faculty and students
  - Expand participation in interdisciplinary clusters and other academic affinity efforts
  - Strengthen collaboration within the graduate and postdoctoral communities through professional programming and networking opportunities
  - Expand prospects for students to pursue civic engagement and public intellectual opportunities

- Ensure the broad visibility of the Excellence in Doctoral Mentoring Initiative as it expands to students, postdoctoral fellows, and all faculty

- Improve resources for graduate students and postdoctoral fellows to connect and collaborate with each other, as well as University faculty and administrative leadership
  - Increase available space for graduate students and postdocs to meet on both campuses and across campuses
  - Continue outreach initiatives such as Dinners and Discourse with the Dean, and Coffee Chats and Cocktails with the Dean

- Connect with alumni in diverse professions
  - Call upon their service as role models and advisors for students

- Enlist faculty and programs in the oversight of curricula, programming and assessment measurements
Sabil Huda is a 5th-year PhD student in Chemical and Biological Engineering. His research focuses on identifying new drug targets for cancer therapy to prevent/treat metastasis which causes 90% of cancer deaths. “The inquisitive and entrepreneurial spirit fostered by the program has triggered me to start talking to more people outside of my academic sphere and I’ve been hearing so many stories of people affected by cancer, which motivates me even more in my lab,” Huda says. “People depend so heavily on the discovery of cancer treatments. The program helped me to put my work in perspective and understand not only the impact of science in the real world, but also how lab work can become a reality in the business and medical worlds.”

The program’s interdisciplinary atmosphere was very different from what Huda was used to, since physicians, scientists and engineers bring different perspectives to the task of solving real-world problems requiring science and business expertise. “My colleagues were exceptional, and the collaborative classroom environment the program created was unique and inspired creativity,” Huda says. “During group-work, each person’s approach to problem-solving added variety and value to the quality of work.”

During the 2010-11 academic year, Huda became a founding member of the Advanced Degree Consulting Alliance, a graduate group (formed by like-minded students interested in consulting work) that receives Community Building Grant funds. The group hosts frequent events, providing guidance and resources to other students who would like information about consulting or who are seeking networking opportunities. Additionally, Huda is a recipient of the Leadership Fellowship from the Center for Leadership for the 2011-12 academic year.

“I cannot say enough good things about Management for Scientists and Engineers,” Huda says. “Developing a strong business acumen will help you grow as a scientist and diversify your thought processes. Anyone interested in the program should apply: it will give you basic ideas you can apply to your work and life, and it might even change your perspective.”

Clean drinking water, a basic human need, may soon become a reality for people in developing countries who lack access to the resource. Chris Wilmer, a 6th year PhD student in Chemical and Biological Engineering, participates in invention competitions, and his most recent win, the Perkins Cole Innovative Minds Award, is for a device that complements the method of water disinfection by sunlight. The invention, created in collaboration with Ron Appel, a PhD student in Electrical Engineering at the California Institute of Technology, uses an electronic dose indicator and parts similar to those found in a solar-powered calculator to inform users whether their water is safe to drink. The inexpensive construction could inspire a future low-cost solution to contaminated drinking water, which causes well over one million deaths worldwide each year.

“In rural areas of developing countries, people often obtain drinking water from lakes or ponds, and, amongst other issues, the water is full of microorganisms,” Wilmer says. “A low cost way to avoid cholera or parasitic infections from this water is to fill a clear plastic bottle with water and leave it in the sun for a day (this is also known as the Solar Water Disinfection Method, or SODIS). The ultraviolet radiation and heat from the sun kills the microorganisms. There are a lot of theories about exactly how this works, but it’s not very well understood. As a happy coincidence, sunlight also kills viruses. My friend, Ron Appel, and I have designed and constructed an indicator that uses a blinking light to inform users of the SODIS method whether or not their water has absorbed enough sunlight energy to be drinkable. Users simply attach the indicator to a water bottle, place it in the sunlight, and wait for the light to start flashing.”

“This inexpensive mechanism is intended to help the 4 million users of the SODIS method avoid the severe diseases associated with contaminated water,” Wilmer says. “The device works as a quality control mechanism, increasing access to safe water.”

In the future, if he has time while completing PhD work, Wilmer intends to continue entering innovation competitions. Keep an eye out for his next problem-solving invention.
MATILDA STUBBS

Stubbs contributed to Rice’s day-to-day operations by helping conduct an internal file audit: gathering all required documents for each case file, making sure they are in the right order and signed by the right people. The project has helped her gain a better understanding of what individual case files look like and what life is like in rehabilitative treatment. She also taught weekly “life skills” classes to Rice residents, covering different topics that aren’t normally broached in a typical classroom, but that children in foster care don’t always learn, including hygiene, table/phone manners, and nutrition.

“For my dissertation, I’d like to compare the paper files of children in foster care to their own narratives,” Stubbs says. “This experience has given me priceless exposure that will prepare me for my future research work. This single program has made me believe in what I want to do with my dissertation and graduate school experience.”

Diversity Snapshot

This section provides information on graduate education at TGS. For PhD students, data are provided in five key areas: admissions, enrollment, outcomes, graduation, and placement. Data are presented for the overall PhD population, for underrepresented minority (URM) status, sex, and citizenship status. Data are also organized into four Broad Field Categories: 1) Arts and Humanities (A&H), 2) Physical Sciences, Mathematics, and Engineering - plus all Kellogg programs, Economics, and Linguistics (PSME), 3) Social and Behavioral Sciences (SBS), and 4) Life Sciences (LS). See page 20 for the list of programs included in each category.

The admissions section contains information on the number of applications, admits, and new students. The enrollment section includes trend and demographic information on total enrollment. The outcomes section contains information on attrition and completion rates. The graduation section contains information on the number of degrees awarded. The placement section contains the average time to degree, as well as first placement data for PhD graduates.

Also provided is information on Master’s programs at TGS in two key areas: enrollment and graduation.
Number of Students Enrolled for PhD Programs Fall 2011

The charts below indicate the number of students enrolled in each PhD program for Fall 2011. Each table represents the programs for each Broad Field Category.

Enrollment for PhD Programs in Physical Science, Math, and Engineering Plus (PSME) Fall 2011

<table>
<thead>
<tr>
<th>Field</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry</td>
<td>150</td>
</tr>
<tr>
<td>Materials Science and Eng</td>
<td>119</td>
</tr>
<tr>
<td>Electronics</td>
<td>126</td>
</tr>
<tr>
<td>Electrical &amp; Computer Eng</td>
<td>130</td>
</tr>
<tr>
<td>Biomedical Engineering</td>
<td>111</td>
</tr>
<tr>
<td>Mechanical Engineering</td>
<td>103</td>
</tr>
<tr>
<td>Physics &amp; Astronomy</td>
<td>94</td>
</tr>
<tr>
<td>Chemical Engineering</td>
<td>108</td>
</tr>
<tr>
<td>Civil &amp; Environmental Eng</td>
<td>58</td>
</tr>
<tr>
<td>Earth &amp; Marine Sciences</td>
<td>57</td>
</tr>
<tr>
<td>Industrial &amp; Manuf Sciences</td>
<td>56</td>
</tr>
<tr>
<td>Computer Science</td>
<td>30</td>
</tr>
<tr>
<td>Engineering &amp; App Math</td>
<td>40</td>
</tr>
<tr>
<td>Finance</td>
<td>34</td>
</tr>
<tr>
<td>Management &amp; Organization</td>
<td>27</td>
</tr>
<tr>
<td>Linguistics</td>
<td>27</td>
</tr>
<tr>
<td>Statistics</td>
<td>26</td>
</tr>
<tr>
<td>Managerial Info &amp; Strt</td>
<td>25</td>
</tr>
<tr>
<td>Marketing</td>
<td>24</td>
</tr>
<tr>
<td>Earth &amp; Planetary Sciences</td>
<td>24</td>
</tr>
<tr>
<td>Theor &amp; App Mechanisms</td>
<td>16</td>
</tr>
<tr>
<td>Aser &amp; Information &amp; Mgmt</td>
<td>44</td>
</tr>
<tr>
<td>Operations Management</td>
<td>13</td>
</tr>
<tr>
<td>Applied Physics</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>271</td>
</tr>
</tbody>
</table>

Enrollment for PhD Programs in Arts and Humanities (AH) Fall 2011

<table>
<thead>
<tr>
<th>Field</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>History</td>
<td>51</td>
</tr>
<tr>
<td>English</td>
<td>57</td>
</tr>
<tr>
<td>Music</td>
<td>30</td>
</tr>
<tr>
<td>Fine Arts</td>
<td>142</td>
</tr>
<tr>
<td>Film</td>
<td>40</td>
</tr>
<tr>
<td>Theatre</td>
<td>27</td>
</tr>
<tr>
<td>Theater &amp; Drama</td>
<td>13</td>
</tr>
<tr>
<td>African American Studies</td>
<td>18</td>
</tr>
<tr>
<td>French and Italian</td>
<td>18</td>
</tr>
<tr>
<td>Gender Studies</td>
<td>15</td>
</tr>
<tr>
<td>Interdisciplinary Studies</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>223</td>
</tr>
</tbody>
</table>

Enrollment for PhD Programs in Social Behavioral Sciences (SBS) Fall 2011

<table>
<thead>
<tr>
<th>Field</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Political Science</td>
<td>108</td>
</tr>
<tr>
<td>Psychology</td>
<td>80</td>
</tr>
<tr>
<td>Sociology</td>
<td>73</td>
</tr>
<tr>
<td>Anthropology</td>
<td>64</td>
</tr>
<tr>
<td>Communication Studies</td>
<td>40</td>
</tr>
<tr>
<td>Carcin &amp; Stn Drugs</td>
<td>40</td>
</tr>
<tr>
<td>Learning Sciences</td>
<td>37</td>
</tr>
<tr>
<td>Clinical Psychology</td>
<td>34</td>
</tr>
<tr>
<td>Media, Technology &amp; Soc</td>
<td>32</td>
</tr>
<tr>
<td>Human Dev &amp; Soc Pol</td>
<td>10</td>
</tr>
<tr>
<td>Technol &amp; Social Bn</td>
<td>7</td>
</tr>
<tr>
<td>Mgmt Org &amp; Sociol</td>
<td>3</td>
</tr>
<tr>
<td>Radio/Television/Film</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>513</td>
</tr>
</tbody>
</table>

Admissions: Number of Applications

The charts below show the total number of underrepresented minorities (URM), female, and international PhD applicants by admitting term from Summer/Fall 2006 through Summer/Fall 2011. The line on each chart is labeled with the total number of applicants by category, followed by the percentage overall. The vertical bars show the totals for each broad field category. For further explanation of the four broad field category areas, see pages 19-20.
Admissions: Number of Admits

The charts below show the total number of underrepresented minorities (URM), female, and international admits by admitting term from Summer/Fall 2006 through Summer/Fall 2011. The line on each chart is labeled with the total number of admits by category, followed by the percentage overall. The vertical bars show the totals for each broad field category.

Number of URM PhD Admits by Broad Field Category

Number of Female PhD Admits by Broad Field Category

Number of International PhD Admits by Broad Field Category

Admissions: Number of New Students

The charts below show the total number of underrepresented minorities (URM), female, and international new students by admitting term from Summer/Fall 2006 through Summer/Fall 2011. The line on each chart is labeled with the total number of new students by category, followed by the percentage overall. The vertical bars show the totals for each broad field category.

Number of URM PhD New Students by Broad Field Category

Number of Female PhD New Students by Broad Field Category

Number of International PhD New Students by Broad Field Category
Outcomes

The charts below illustrate the outcomes of PhD students by admitting cohort and student group. The first chart shows all students, the next chart shows URM students, then Female students, and finally International students.
**Eight-Year Attrition Rate**

The chart below shows the percentage of students who left their PhD program without a PhD within the first eight years of enrollment. The chart includes attrition rates for all students, then by URM/NON-URM, female/male, and international/domestic, and each data group is labeled with the number matriculated and the percentage attrition.

**Eight-Year Completion Rate**

The chart below shows percentage of students who received their PhD within the first eight years of enrollment. The chart includes the eight-year completion rate for all students, then by URM/NON-URM, female/male, and international/domestic, and each data group is labeled with the number matriculated and the percentage completion.

**PhD Placement**

The chart below shows the number of graduates from PhD programs, the percentage of those graduates, whose placement is known, and the average and median times to degree completion for those graduating cohorts.

**TGS PhD graduates obtain jobs in many different areas. Below are five main categories: Academic, Industry, Postdoctoral, Government and Nonprofit, and Other. Academic includes teaching and research positions at a university or college. Industry includes research, leadership, technical, and professional positions at private industries and businesses. Postdoctoral includes postdoctoral fellows, researchers, associates, and other training positions, such as medical residents and students. Government/Nonprofit includes research and leadership positions at government and nonprofit organizations. Other includes individuals who are self-employed, work at medical facilities, and stay-at-home parents.**
The chart below shows the category of placement that graduates secured by broad field category.

<table>
<thead>
<tr>
<th>Broad Field Category</th>
<th>All PhD Graduates, '06-07 - '10-11 Combined First Placement Category by Broad Field Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>A &amp; H</td>
<td>73%</td>
</tr>
<tr>
<td>S</td>
<td>12%</td>
</tr>
<tr>
<td>PSME</td>
<td>25%</td>
</tr>
<tr>
<td>SBE</td>
<td>53%</td>
</tr>
</tbody>
</table>

Percent of Graduates with Placement Information

- Academic
- Post Doc/Add'l Training
- Industry
- Gov't/Non-Profit
- Other

The charts below show first placement categories by URM (Red), Sex (Blue), and Citizenship (Purple).

All PhD Graduates First Placement Category by URM, Sex, and Citizenship

2006 – 2007 to 2010 - 2011

The Carnegie Classification categorizes all U.S. Higher Education Institutions into the following general areas: research/doctoral universities, master's colleges and universities, baccalaureate colleges, other, and foreign institutions. Other includes colleges awarding associate degrees and specialized institutions that award degrees in a particular field such as medical and law schools, religious institutions, schools of business, engineering, art, design, and military institutes. Northwestern University is a research/doctoral university.
PhD Placement

The figure below indicates the U.S. News and World Report ranking of institutions where Northwestern University PhD graduates were placed in an academic or postdoctoral position at a U.S. institution.

All PhD Graduates '06-07 - '10-11
Acad/Post 1st Placements, US News & World Rprt 2011 Ranks
Master's Programs

The charts below show the total number of underrepresented Minorities (URM), female and international Master’s enrollees by fall term from Fall 2006 through Fall 2011. The line on each chart is labeled with the total number of enrollees, and the vertical bars show the totals for each student category.

Enrolled
Number of Master's Students Enrolled by Underrepresented Minority (URM) Status

Graduates
Number of Master's Graduates by Underrepresented Minority (URM) Status

Number of Master's Students Enrolled by Sex*

Number of Master’s Graduates by Sex

Number of Master's Students Enrolled by Citizenship Status

Number of Master’s Graduates by Citizenship Status

*Students whose sex is not identified are not counted in this chart.
Planning for the New Majority
United States Losing Dominance in Educational Attainment

For several decades, the United States was the undisputed leader in producing college educated adults. America now ranks 16th in the percentage of young adults with a college degree and may soon be surpassed by even more countries.1

Educational Attainment: Percentage of the Population with College Credentials

The United States is also losing its dominance in many important fields. In 1975, the US was second only to Japan in the proportion of degrees earned in sciences and engineering.2 Now, the US ranks 27th out of 29 wealthy countries in the proportion of college students with degrees in sciences or engineering and 48th out of 133 countries in Math and Sciences.3 Half of all individuals with a doctorate in the U.S. are foreign born; 39% of science and engineering PhD graduates are foreign born.4

In order for the United States to remain competitive in the global marketplace, educational attainment levels must increase for all its residents, particularly in areas that advance the skills required to secure our leadership in the intellectual knowledge economy. Increasing college success has emerged as an important national strategy for ensuring a competitive economy and a strong workforce for the future. Many policy makers, state and federal government officials, national higher education associations, and foundations have issued a call for raising the educational level in the United States. The Obama Administration has set a goal of the US regaining its position in producing the highest number of college graduates in the world by 2020. 5 The Lumina Foundation for Education set a goal of increasing the number of Americans with a college degree to 60% and to close the attainment gaps for traditionally underrepresented populations by 2025.5

The goal of increasing the educational attainment level in the United States depends on the success of underrepresented minorities in higher education. There are significant gaps in educational attainment levels among underrepresented minorities compared to their peers. Currently, 56% of Asian/Pacific Islanders and 36% of Whites aged 25 to 29 obtained a bachelor’s degree compared to just 19% of Blacks and 12% of Hispanics.6

<table>
<thead>
<tr>
<th>Percentage of US Bachelor’s Degree Attainment by Race and Ethnicity, Ages 25 to 29</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian</td>
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<tr>
<td>White</td>
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<tr>
<td>Black</td>
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<tr>
<td>American Indian</td>
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<td>Hispanic</td>
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</tbody>
</table>


For advanced degrees, disparities in educational attainment are also wide. Currently, 14% of Asian/Pacific Islanders over the age of 25 have a master’s degree compared to 8% of Whites, 5% of Blacks, 4% of American Indians, and 3% of Hispanics. Six percent of Asian/Pacific Islanders have a doctorate or first professional degree compared to 3% of Whites, and 1% of Blacks, Hispanics, and American Indians.

<table>
<thead>
<tr>
<th>Percentage of US Advanced Degree Attainment by Race and Ethnicity, Ages 25+</th>
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</thead>
<tbody>
<tr>
<td>Asian</td>
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The national goal of increased postsecondary educational attainment is vital for our future, but it is a formidable task. The number of bachelor’s degrees conferred to underrepresented minorities would need to almost double to match their share of the US population.5 Underrepresented minorities now comprise one third of the US college age population but only account for 12% of bachelor’s degrees attained. Enrollment of international students increases beyond the bachelor’s degree level accounting for 32% of graduate enrollment, 11% of master’s degrees, and 27% of doctorates. Underrepresented minorities account for 18% of students enrolled in graduate education, 17% of master’s degrees and 10% of doctorates.

<table>
<thead>
<tr>
<th>Higher Education Enrollment and Degrees by Educational Level and Minority and Citizenship Status</th>
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<tbody>
<tr>
<td>Doctorates Conferred</td>
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<td>Master’s Degree Conferred</td>
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<tr>
<td>Graduate Enrollment</td>
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<tr>
<td>Bachelor’s Degrees Conferred</td>
</tr>
<tr>
<td>Undergraduate Population</td>
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<tr>
<td>U.S. College Age Population</td>
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</tbody>
</table>


Demographic Trends Add to the Urgency of Addressing Disparities in Educational Attainment

The educational attainment gap among underrepresented minorities is alarming given the country’s demographic trends. The population of the United States will continue to get more diverse as the minority population continues to grow, most notably for Hispanics and Asians, the primary immigrant groups to the United States. The Hispanic population increased from 6% in 1980 to 16% in 2010.11 By 2042, minorities will be the new majority. By 2060, minorities will account for 54% of the total U.S. population; one in three people will be Hispanic.
Given the current trends, it is projected that there will be a decrease of 5% in the nation's overall educational attainment rate by 2022. The resulting demographic changes will likely lead to a population that is less educated than today unless efforts are made to improve access and graduation rates in higher education. Success in increasing educational attainment cannot be achieved without addressing the challenge of retaining and attracting underrepresented students in the higher education pipeline.

The Economic Significance of an Advanced Degree

The convergence of the demographic shift in the United States, along with the disparities in educational attainment, suggests that some underrepresented minorities will be increasingly marginalized and deprived of economic, social, and democratic opportunities if educational disparities are not addressed. There is a persistent and increasing demand among employers for workers with an advanced degree. It is projected that the number of jobs requiring a master's degree will increase by 22% and jobs requiring a doctorate or advanced professional degree will increase by 20%. However, it is clear that an individual's level of economic success is strongly related to educational attainment. The expected lifetime earnings of someone with a doctorate are 44% greater than someone with a bachelor's degree and 1.5 times greater than someone with a high school diploma.

Median Lifetime Earnings by Highest Level of Educational Attainment

In addition to the economic and employment benefits, college graduates enjoy added physical, educational, social, and civic benefits for themselves and their families. College graduates are more likely to have employer-provided benefits, consider themselves in better health, exercise more, smoke less, and have longer life expectations.  