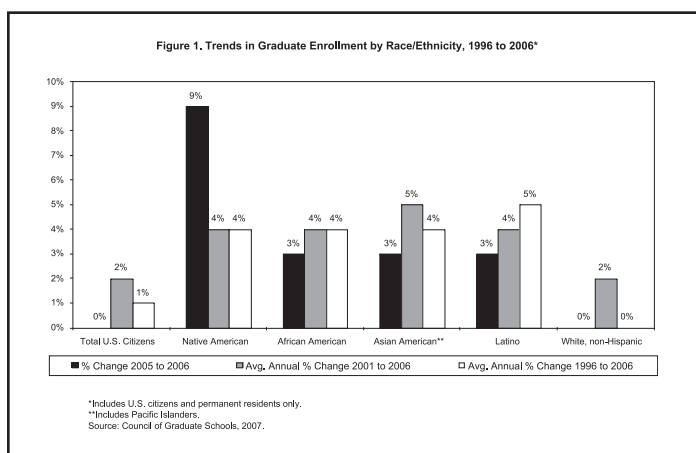


# Data Sources: Graduate Enrollment by Race/Ethnicity, 1996 to 2006—Special Analysis from the Graduate Enrollment and Degrees Survey Report

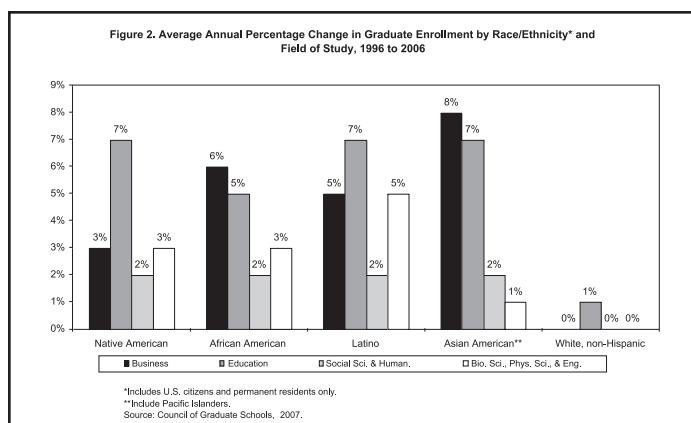
Every year since 1986, the Graduate Record Examinations Board (GRE) and the Council of Graduate Schools have jointly sponsored the Survey of Graduate Enrollment and Degrees. The resulting annual *Graduate Enrollment and Degrees* report provides important information on graduate student enrollment, applications, and degrees conferred. Both organizations believe that providing an annual examination of changes in enrollment and degrees awarded by gender, race/ethnicity, and citizenship status is essential for understanding the graduate enterprise. The most recent survey results reveal that over the past decade, graduate schools have enrolled an increasingly diverse student population. Recent increases in the enrollment of students from racial/ethnic minority groups portend great changes in graduate student demographics in the years ahead.

While international students greatly contribute to diversity, this article focuses on changes in enrollment by race/ethnicity among U.S. citizens in graduate programs. The focus on U.S. citizens by racial/ethnic group is important due to the historic under-representation of African Americans, Latinos, and Native Americans in higher education. Future special analyses from the Enrollment and Degrees survey data will examine changes in international student enrollments.

The report *Graduate Enrollment and Degrees: 1996-2006* (Council of Graduate Schools, 2007) reveals that total enrollment of U.S. citizens in graduate school was essentially unchanged from 2005 to 2006, increased by an annual average of just 2% during the 2001 to 2006 period, and grew only 1%, on average, each year between 1996 and 2006. However, during the five and ten-year periods, average annual enrollment rose by at least 3% for every racial/ethnic minority group, compared with just 2% among White, non-Hispanics from 2001 to 2006. There was virtually no change in the number of White, non-Hispanic graduate students from 1996 to 2006 (see Figure 1).



Minority enrollment increased substantially in biological sciences, physical sciences, and engineering (see Figure 2). On average, during the past decade the number of Latinos in biological and physical sciences and engineering rose 5%, the highest growth rate of any racial/ethnic group in these disciplines. The number of African Americans and Native Americans in these fields increased 3%, but the number of White, non-Hispanics basically did not change. A few other fields outside the science and engineering disciplines also saw large increases in minority students; the number of African Americans in business programs jumped by an annual rate of 6% during the past ten years, and Asian American enrollment gains in business and education also were particularly strong. At the same time, the number of White, non-Hispanic students was flat in all these fields except education.



As a result of these trends, minority graduate students make up an increasing share of the U.S. citizens in graduate schools. As Table 1 shows, in 1996 African American students accounted for 8% of the total U.S. citizen graduate student population. Ten years later, they constituted 13%. Latinos and Asian Americans also accounted for larger shares of the total, while the percentage of students who were White, non-Hispanic declined from 81% to 72%. Collectively, under-represented minorities (African Americans, Native Americans, and Latinos) increased from 14% of total U.S. citizen students to 22%.

**Table 1. Distribution of Graduate Enrollment by Race/Ethnicity, 1996 and 2006\***

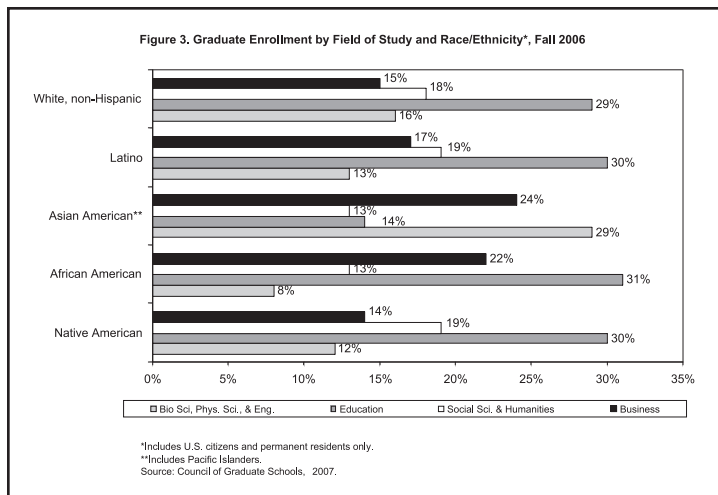
	1996	2006
African American	8%	13%
Native American	1%	1%
Asian American**	5%	6%
Latino	5%	8%
White, non-Hispanic	81%	72%

\*Includes U.S. citizens and permanent residents only.  
\*\*Includes Pacific Islanders.  
Source: Council of Graduate Schools, 1998 & 2007

While the overall gain in minority students is welcome news, it should be noted that in certain fields African Americans, Native Americans, and Latinos

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remain under-represented. In 2006, engineering, physical sciences, and biological sciences collectively accounted for only 8% of African Americans, 12% of Native Americans, and 13% of Latino graduate students, compared with 16% of White, non-Hispanics and 29% of Asian Americans (see Figure 3). In contrast, about 53% of African American graduate students, 47% of Latinos, and 44% of Native Americans were enrolled in education and business.



American graduate schools will most likely continue to become more diverse over the next decade. According to the National Center for Education Statistics (NCES, 2008), total enrollment of students in master's and doctoral programs is expected to rise 21% over the next ten years, when an estimated 2.6 million students will be seeking advanced degrees. The data from the most recent *Graduate Enrollment and Degrees* report suggests that many of these students will be members of minority groups. This increasing diversity raises a number of questions and potential challenges for graduate deans: Will funding and other resources be readily available to help support these students? Will the increased diversity affect students' perceptions about program or campus climates? What additional training or support might graduate school faculty or staff need to serve growing minority student populations? As deans respond to these and other questions regarding minority student participation, the answers may have very broad implications for the future of graduate education.

By Kenneth E. Redd, Director, Research and Policy Analysis

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## PSM Program Assessment

perceptions and therefore, evaluation. PSM students can face faculty bias since they may be hard pressed to participate in many traditional academic activities; PSM students already meet extra course requirements, may be employed, or have other non-traditional demands that preclude full participation. Another commonly expressed concern is the reluctance of some academic units to embrace "outside instructors" considered both necessary and desirable for PSM "plus" courses. Unspoken expectations for PSM programs can also cloud assessment; many programs report pressure to constantly increase revenues – the expectation of an ever upward trajectory for enrollment can create a conflict between escalating quantities and maintaining quality.

PSM program directors and key faculty can face the bias that PSM-related activities are "add-ons" without concomitant respect and weight in academic evaluation processes. Moreover, many program directors report unspoken expectations that their activities will extend beyond the purview of the PSM programs. Directors may be called upon to find internships and employment opportunities for non-PSM students. There is a general perception that the directors can forge research alliances between the institution and industry. Several directors report that they are called upon to participate in institutional fund-raising, in general, and with industry in particular. While a mature and stable PSM program could well provide such benefits, most existing programs rely on one or two key personnel and are struggling to become an established facet of institutional graduate education. Perceived failure to meet additional expectations can create a less positive appraisal environment, for this reason it is important to improve institutional awareness and supporting infrastructure for PSM programs prior to assessment. We propose that PSM programs and PSM program directors have clearly articulated institutional expectations (especially important both for pre-tenure faculty members).

#### Conclusion

There is widespread consensus that assessment is a necessary and beneficial process for the PSM, for both summative and formative purposes. There is also consensus that evaluation of PSM programs presents a different challenge than more traditional programmatic assessments of teaching and learning, where most evaluators are academicians and have in depth understanding and familiarity with the goals and objectives. We recommend that guidelines for PSM assessment (perhaps including succinct and informative survey tools) should be created at a national level under the leadership of the National PSM Association and the Council of Graduate Schools, to promote sharing of ideas and feedback between programs. PSM programs will also need access to institutional resources and expertise for development, implementation and assessment of individual programs. Evaluation results will be valuable to all PSM

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