Higher Education

Classroom

1) **National Science Board. (2010) *Science and Engineering Indicators: 2010*. Arlington, VA: National Science Foundation. http://www.nsf.gov/statistics/seind10/**

   S&E Indicators 2010 provides statistical data that is central to important questions for U.S. science and engineering (S&E) policy: What are the major changes in the world's S&E enterprise, and how do they affect the United States? How do Americans in S&E jobs fare at a time of economic challenge? And how do American views about science and engineering, and issues such as the environment, climate change, and stem cells compare with the views held by others around the world? Chapter 2 focuses on higher education, including the current statistics and trends in enrollment and degree completion for undergraduate and graduate students.

2) **Project Kaleidescope. (2002 & 2006) *Recommendations for Action in Support of Undergraduate Science, Technology, Engineering, and Mathematics* and *Recommendations for Urgent Action*. Washington, DC: AACU. http://www.pkal.org/documents/ReportonReports.pdf**

   These reports on reports presents perspectives on the past, present, and future of undergraduate programs in mathematics, technology, and the various fields of science and engineering.

3) **AAAS. (2004) *Invention and Impact: Building Excellence in Undergraduate Science, Technology, Engineering and Mathematics Education*. Washington, DC. http://www.aaas.org/publications/books_reports/CCLI**

   This 2004 report from an AAAS discusses many aspects of undergraduate education including: assessment and education research, successful pedagogy, visualizations to support teaching, web-based learning environments, the benefit of interdisciplinary/multidisciplinary courses and curricula, faculty professional development, and undergraduate research (both lab experiences for courses and independent projects).

4) **Chen, X. & Weko, T. (July 2009) *Stats in Brief: Students who study science, technology, engineering, and mathematics (STEM) in Postsecondary Education*. Alexandria, VA: National Center for Education Statistics. http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2009161**

   Using data from the 1995-96 Beginning Postsecondary Students Longitudinal Study (BPS:96/01), this Statistics in Brief focuses on undergraduates who enter STEM programs and examines their characteristics and postsecondary outcomes (persistence and degree completion) several years after beginning postsecondary education. Findings include: a) Twenty-three percent of 1995–96 beginning postsecondary students had majored in a STEM field at some point between their initial enrollment in 1995–96 and about 6 years later, as of 2001; b) STEM entrants generally did better than non-STEM entrants in terms of bachelor's degree attainment and overall persistence; and c) Among all STEM entrants between 1995–96 and 2001, some 53 percent persisted in a STEM field by either completing a degree in a STEM field or staying enrolled in a STEM field, and the remaining 47 percent left STEM fields by either

switching to a non-STEM field or leaving postsecondary education without earning any credential.