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INSTITUTIONS IN NATIONAL SCIENCE FOUNDATION'S HBCU-UP PROGRAM ARE LEADING GATEWAYS TO SCIENCE AND ENGINEERING DEGREES

Washington, D.C., March 7, 2011—African American students at historically black colleges and universities are twice as likely as African American students nationally to complete graduate degrees in science and engineering if their colleges received a National Science Foundation Historically Black Colleges and Universities Undergraduate Program (HBCU-UP) grant.

The National Science Foundation (NSF) established the HBCU-UP program to help these institutions build their capacity to train professionals in science, technology, engineering, and mathematics (STEM). The program's ultimate goals are to retain students through graduate education, boost their employment in STEM fields, and widen the pool of minority professionals.

An [Urban Institute evaluation](#) published today looked at 29 institutions with NSF HBCU-UP grants, covering 1999 to 2008. Some 14.8 percent of HBCU-UP program students earned graduate degrees, compared with 7.8 percent of all African American students, and 32.8 percent are employed full-time in STEM versus 25.0 percent of their counterparts nationally.

"While minorities are the fastest growing segment of the population, they are underrepresented in science and engineering. Historically black colleges and universities not only serve a disadvantaged population, but they also have fewer resources to support it. The HBCU-UP program provided needed resources. These programs have been particularly successful in educating and retaining minority women in STEM," says Clemencia Cosentino de Cohen, one of the two lead researchers.

Women in these programs outperform women nationally both in educational attainment and in STEM employment: 13.4 percent of HBCU-UP women complete a STEM graduate degree, versus 9.0 percent of female college graduates nationally; and 29.3 percent of them are employed full-time in STEM, compared with 20.0 percent of all female college graduates.

The researchers identified core strategies employed by successful projects, such as the involvement of students in research, course reform and the development of new courses, and faculty professional development. Participating institutions also upgraded laboratory and other teaching facilities, worked on improving instruction, and provided summer bridge programs for entering freshmen.

The evaluation, "[Capacity Building to Diversity STEM : Realizing Potential among HBCUs](#)," by Beatriz Chu Clewell, Clemencia Cosentino de Cohen, and Lisa Tsui, was prepared for and funded by the National Science Foundation.

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