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Minorities Could Help Fill Engineering Gap And Enhance Field Diversity

If you're black or Hispanic and have yet to decide on a college, university or technical school major, you might consider studies that can lead to lucrative careers that the National Association of Colleges and Employers reports this year commanded as much as nearly \$75,000 in annual salaries. There's a gap between the supply of engineers and the demand for them that minorities who comprise less than 5 percent of the engineering workforce might help fill, according to the Foundation Coalition web site. Civil and biomedical engineers particularly are expected to see employment growth over the next decade, according to the Bureau of Labor Statistics. This is only one surprising tidbit of information that comes up when prospective students look into [college distance learning](#) materials.

Engineers, according to the Bureau of Labor Statistics, rely on science and math principles to find economical solutions to technical problems. That might sound complex, but there are engineers in a variety of fields, including aeronautics, petroleum, computers, electronics, biomedical sciences, the environment, mechanics and more. Some say that student diversity can help with conflict resolution skills and that diversity in the engineering workplace might make for products that have a wider, international customer base. Perhaps not surprising, then, a variety of organizations has been working to encourage minority participation in engineering.

Becoming an engineer typically requires a bachelor's degree at minimum, according to the Bureau of Labor Statistics reports. While campus and online college, university and technical school degree programs can get pricey, minority students can offset the costs of tuition and fees with scholarships, fellowships and grants for college, some designed exclusively for their pursuit of engineering degrees. Minorities might also participate in mentoring programs, where large corporations are partnering with different agencies as a means of what some say can improve retention and success with engineering studies.

One group that offers mentoring programs and more is the National Society for Black Engineers, a non-profit student managed society. Minority students and others also have online opportunities to be paired with professional engineer mentors - through an e-mentoring network known as MentorNet. AT&T has partnered with MentorNet to focus STEM (Science, Technology, Engineering and Math) students at Historically Black Colleges and Universities, a news release on the e-mentoring network web site suggests.

Hispanic Engineering & Technology Magazine recently told the story of Mary Fernandez, who noted that she's AT&T's first minority woman executive director. As executive vice president for Young Science Achievers, Fernandez works to boost interest and excitement in science and engineering among girls and minority students, the report noted. She also chairs AT&T's fellowship program and helps to advise, energize and evaluate candidates for graduate scholarships targeting women and minorities, according to the report.

IBM also has gotten in on the action. A partnership between IBM, the Society of Professional Hispanic Engineers and the Hispanic Engineer National Achievement Awards Conference is known as the Hispanic Alliance for STEM (Science, Technology, Engineering and Math) Opportunities, according to information on the society's web site. The alliance began in 2007 with a STEM-centered camp for youngsters that might spur interest in the field at an early age, the web information noted.

A National Coalition of Underrepresented Racial & Ethnic Advocacy Groups in Engineering and Science is looking at collaborating with community colleges to get underrepresented students to continue studies through bachelor's degree programs in engineering, according to its web site. A Massachusetts Institute of Technology engineer and educator in June was recognized for his efforts toward advancing engineering education and practice around the world, Hispanic Engineering and Information Technology reported. Paul Edward Gray, among other things, worked to promote stronger ties between academia and industry and to increase opportunities for women and minorities, the article noted.

Minorities have a variety of scholarship opportunities in engineering. The National Society of Black Engineers offers scholarships to its members, and Black Excel lists scholarships for general and specialized studies for which black studies and other minorities might be eligible. The Hispanic Scholarship Fund on its web site provides information about a variety of scholarships. The Society of Professional Hispanic Engineers, which also has student chapters, on its web site reports that its members have access to more than \$2 million in scholarship opportunities in math, science and engineering. The American Society for

Engineering Education has a minorities in engineering division that works to increase participation of Hispanic/Latino, Black/African American and Native/Pacific Islander Americans in engineering education and the profession and on its web site lists scholarship, fellowship and internship opportunities. Good [online certificate programs](#) sources will help make education plans easier.

Minority students who are interested in pursuing engineering degrees through [online course](#) programs should explore associations and other sources of financial aid as they pursue the [degree](#) they need for their goals - both in education and in their chosen profession.

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