

AC 2008-1866: A BRIDGE TO SUCCESS: TRANSITIONING MINORITY STUDENTS THROUGH AN ENGINEERING SUMMER BRIDGE PROGRAM

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A Bridge to Success: Transitioning Minority Students through an Engineering Summer Bridge Program

Many quality freshmen leave engineering, not because of an inability to do the work, but because of transitional issues and a lack of understanding where a degree in engineering can lead. Minority freshmen are at even greater risk, especially when transitioning from a diverse high school to a predominantly Caucasian institution. At the University of Arkansas, the College of Engineering has created a summer bridge program to help minority students successfully transition from high school seniors to successful engineering freshmen.

The Engineering Summer Bridge Program was a three week, all expenses paid, in-residence program held on the University of Arkansas campus. During this program, students experienced campus life while also learning more about engineering. Through “engineering in action” field trips, fun and challenging engineering design problems, team competitions and experiencing research labs, students became significantly more excited about their career possibilities and understood the benefits of persisting in a rigorous engineering degree program. The bridge program used teamwork and competitions to help keep students engaged in all aspects of the program. Participants also attended new student orientation during the bridge program. In addition to the academic portion, socialization, bonding and college life adjustment was addressed through evening and weekend structured and unstructured activities and free time. This paper will detail the program components and activities in both the academic portion and the socialization/college life program.

Twenty-one students participated in the pilot Engineering Summer Bridge Program in 2007. Of these students, 100% returned to pursue engineering degrees at the University of Arkansas and are housed in a living-learning community on campus. At the beginning of the spring semester, all but three students were still in the program, doing extremely well academically, were fully adjusted to college life, and were confident in their choice of engineering as their major. Three students who left the program are still in college but in different majors. Information on the students’ situations academically and socially will be discussed. Several bridge program students are already showing leadership skills. Four of the six officers of the new Freshman Engineering Program student organization are bridge program students, and one is the President of the organization. Clearly, the bridge program participants have adapted to campus life and have bonded with each other, the university and the College of Engineering.

The major issues affecting minority freshmen retention and how the Engineering Summer Bridge Program addressed these issues will be presented. Program evaluation results provided will include end-of-summer bridge program survey results and participant freshman retention and academic success. Comparisons will be made between students who did and did not participate in the bridge program.