Augmenting the Engineering Pipeline through NSBE Jr.

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High school science education programs, particularly those with high minority populations, often lack the material and human resources necessary to instill a proper educational foundation in students. The National Society of Black Engineers (NSBE) has made strides in assisting K-12 science educators through the Pre-College Initiative (PCI) and NSBE Jr. (the chapter affiliation for PCI members). Engineering graduate students from the Georgia Institute of Technology, as part of its NSF-supported Student and Teacher Enhancement Partnership (STEP) program, have recently initiated NSBE Jr. chapters in three metro-Atlanta area high schools. The goals of this outreach effort are to improve the science background of high school students, advance the high schools’ science education potential, increase the pool of high achieving under-represented minority students interested in engineering and science, and enrich graduate students with the opportunity for service within the community.

NSBE Jr. chapters provide multiple benefits to participating high schools, such as:

- Seminars by invited speakers from industry and motivational speakers who serve to instill a sense of hope, purpose, and academic drive in traditionally underrepresented students.
- Information about college entrance requirements as well as judicious assistance with tasks such as SAT exam and college application preparation.
- Opportunities for students to experience hands-on engineering activities such as creating web pages, robots, and electronic circuits.
- Mentoring by minority graduate students active in cutting-edge technology and engineering research.

This poster will focus on the underpinnings critical to the success of the program—the mechanisms put in place in Metro Atlanta via STEP and the Georgia Tech Society of Black Engineers (GTSBE – Georgia Tech’s NSBE Chapter and parent chapter to the three NSBE Jr. Chapters) to make NSBE Jr. as beneficial as possible to all parties involved, and the activities implemented, hurdles overcome, and lessons learned. In the process we will provide an implementation framework robust enough to help other universities duplicate what has been achieved at Georgia Tech.

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