

**State University System
Meeting Statewide Needs in Engineering
2008-2009 Budget**

Total Budget Need: \$4M

To be a global leader in the 21st century knowledge economy, Florida must increase its production of engineering graduates as more, highly talented engineers are essential for creating new technology companies, for retaining and growing existing businesses, and for attracting new industries to the state. The passage of the A++ legislation has created a vital opportunity for achieving this goal. The SUS engineering schools propose to build upon the new A++ Plan for Education by collaborating with K-12 school systems to create an engineering major for high school students and to follow this with a new initiative, EMERGE, for increasing retention and graduation of engineering students.

1. Engineering Major - An A++ Plan:

The new A++ Plan for Education provides an opportunity to create an engineering major for high school students that can help address the root causes for stagnant (or declining) interest and enrollment in engineering, science, and mathematics. In the first phase, each SUS engineering school will identify selected counties and work with their K-12 school systems to develop curriculum, course content, laboratory experiences, and teacher training programs that will enable and enhance engineering majors for high school students. The program will then be expanded to cover the entire state in later years.

2. Enhanced Methods for Education, Retention, and Graduation of Engineers (EMERGE):

By utilizing the expertise of engineering faculty and professional staff, EMERGE will create (1) new programs to make teaching of mathematics and sciences in the lower division more effective and attractive for engineering majors, (2) new courses at the freshman/sophomore levels to reduce attrition in early years, (3) special advising strategies for lower division and community college transfer students, and (4) programs to provide individual attention to engineering majors who are already enrolled but are in danger of academic failure.

Outcome anticipated:

Within two years of full implementation, there will be a 5% increase in the number of freshmen declaring engineering majors and an additional 5% increase in the number of university engineering students moving from lower to upper division studies. As the proposed initiatives move into the third and fourth years, we will witness increased graduation rates for engineering students, which will fulfill the primary goal of increasing the production of engineers in the State of Florida.