

LEAD[®]

Program for ENGINEERING

The LEAD (Business) Model

For over 25 years the Leadership, Education, and Development program has provided business education to over 7,500 academically strong high school youths of color. LEAD was founded in 1980 when the landscape in American business dictated the need for programs like LEAD to diversify the management pool within the business sector. The LEAD Program met this challenge by establishing on campus Summer Business Institutes which encouraged this nation's high potential students of color to pursue careers in business. LEAD for Business partners with 11 of the most respected business schools in the US, among them the Wharton School at the University of Pennsylvania, Stanford University and the Tuck School at Dartmouth College. Today, over 4,500 alumni from the LEAD Program for Business have risen to the highest levels of management in the business sector.

While LEAD has great pride in its past achievements, it is clearly understood that the business sector still has a long way to go until parity is reached in both opportunity and compensation.



Moving Forward

The success of LEAD's past has produced significant interests by student applicants. Today, LEAD receives 3x the number of qualified applicants than it has space available. Also, listening to the business partners and universities that are looking to recruit students with a greater sense of mathematical ability has caused LEAD to look more seriously at its expansion plan.

In the global economy, the role of any leader regardless of industry will be granted to individuals who have demonstrable quantitative problem solving skills, genuine sensitivity toward people of diverse heritage, and creativity that surpasses conventional thinking. Preparing students for careers that require a comfort with mathematical reasoning tactics will be critical. Many of these skills are not taught in the standard classroom setting; they must be learned through exposure to innovative educational models, concentrated career development interventions, and external, hands-on learning experiences.

A New Initiative

After hearing requests from sponsors, applicants, and university admission officers, LEAD will leverage the use of its highly successful youth development program model and launch into additional summer programs targeted to students with proven mathematical ability and that have interests in more technical fields of study.

LEAD envisions a partnership with the nation's top 50 undergraduate colleges for Engineering. The objective is to lay the foundation for an innovative curriculum that will increase the number and quality of students interested in careers in engineering and other technical fields.



Summer Engineering Institute (SEI)

The SEI Programs will be designed to provide hands-on learning for mathematically “curious” high school tenth and eleventh grade students from the African American, Hispanic, Native American, under-represented Asian and economically disadvantaged communities.

LEAD will seek the support from hosts university faculty and corporate sponsors to design and implement an engineering focused curriculum for the multi-year summer program.

First Summer: 10th Grade Students
30 students per SEI (15 Female & 15 Male)
3 week on campus residency

Second Summer: 11th Grade Students (Continued from Prior Year)
30 students per SEI (15 Female & 15 Male)
3 week on campus residency



The Students

The LEAD National office will rely on its successful formula for identifying, recruiting, and selecting the most appropriate students for the program. Great consideration will be given to students applying from economically disadvantaged communities. Each student will prepare an application, including biographical information, two essays, leadership experience and personal recommendations.

LEAD will solicit the support of undergraduate engineering school admissions officials, high school counselors, and human resource staff members to select each SEI class.

The Course

The aim is to introduce students to careers in engineering by challenging the students to solve real-world engineering challenges through various learned approaches. Hands-on laboratory experience, lectures, corporate/plant site visits and team based project work will be stressed.

Classroom lectures will focus on various topics, such as:

- Electrical engineering will emphasize the processes needed to bring a designed system through to the manufacturing stage in order to meet standards.
- Mechanical engineering will emphasize designing machines and gadgets.
- Computer engineering will emphasize the study of database design, data communications, operating systems design, algorithm development, and applications of artificial intelligence.
- Civil engineering will emphasize architecture to solve problems of project planning, site planning and building design.

The program will also incorporate learning engineering disciplines such as Chemical, Biotech, Biomolecular, Materials Science, Aerospace, Polymer-Textile and Fiber and Technological Systems based on the schools engineering expertise.

Each week there will be one late afternoon session that covers topics such as University admission, financial aid and scholarships, engineering affinity group presentations, the engineering curriculum and engineering as a profession.

The Rollout

Both Georgia Institute of Technology and University of California-Berkeley have signed on as our 2008 inaugural Summer Engineering Institutes. Each school will host 30 students on campus this summer.

LEAD National is currently meeting with additional top 20 nationally recognized Engineering colleges to determine partners for 2009 and 2010.

In 2009, 4 additional programs will be added and we will increase by 2 programs each year over the 3 years thereafter.