



The need to increase and diversify the engineering workforce has been well documented. Universities have an opportunity to address both these issues by recruiting and supporting students who are underrepresented in the engineering world—female, minority and first-generation students.

The Engineering Career Awareness Program, or ECAP, employs research-based and field-tested approaches to remove the barriers that come between these students and an engineering degree. Underrepresented students are more likely to enter college with less preparation in math. They are also more likely to face financial hardship and have less support from their families. These students often do not have mentors or role models in the field of engineering; they may never have seen an engineer who looks like them. ECAP addresses these challenges by recruiting the most promising students from these groups and giving them the academic, financial and social support they need to succeed in college.

ECAP STRATEGIES

- **STUDENT RECRUITMENT** – Engineering faculty and staff develop relationships with high schools, community colleges and universities that have large populations of minority and first-generation students. They educate school counselors about the program, and they meet with prospective ECAP students.
- **FINANCIAL ASSISTANCE** – ECAP fully covers each student's annual college expenses (tuition, fees, room and board, and books) after other scholarships, grants and financial aid have been awarded.
- **SUMMER BRIDGE PROGRAM** – ECAP's three-week summer bridge program provides workshops and seminars on study skills, social skills, time management and professional development. ECAP students also tour the university and visit local industries.
- **FRESHMEN ENGINEERING PROGRAM** – ECAP students also benefit from the resources of our Freshman Engineering Program.
- **PEER MENTORING AND STUDENT SUPPORT** – All ECAP scholars are paired with an upperclass ECAP student who helps guide them through their first year. Engineering faculty and staff also provide help and support. This strong support network leads many student to describe ECAP as a family.
- **INTERNSHIPS AND RESEARCH EXPERIENCES** – Each summer, ECAP students are required to participate in internships, summer research experiences or study abroad programs.



ECAP SUCCESS

- Underrepresented students (females, ethnic minorities and first-generation) accounted for over half of the fall 2016 freshman engineering class.
- Since ECAP was initiated, the number of female and ethnic minority undergraduate engineering students more than tripled.
- ECAP students graduate from the U of A and the College of Engineering at statistically higher rates than the overall engineering population. On average, 66 percent of ECAP students graduate with engineering degrees, as compared to 46 percent of the overall undergraduate engineering population, and the general U of A graduation rate of ECAP students is 75 percent.
- Before ECAP, engineering students made up 8 percent of the U of A's minority population. In 2016, this number is 15 percent.
- Since 2007, 71 ECAP students have received their bachelor's degrees in engineering and are currently employed with companies such as Walmart, HP, GE Healthcare, Bechtel, BNSF, ExxonMobil, Lockheed Martin, and Phillips66, or are currently pursuing graduate degrees.
- ECAP has received awards from the National Academy of Engineering, the Global Engineering Deans Council, the National Association of Multicultural Engineering Program Advocates, College Board and the Council of Advancement and Support of Education.