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The Polytechnic Campus

THE POLYTECHNIC CAMPUS

The [Polytechnic Campus in Mesa](#) is one of the five campuses of Arizona State University and is located on the former property of a United States Air Force base, Williams Field. It was acquired in 1993 through the Defense Base Closure and Realignment program and split among several entities including ASU. The university shares approximately 600 acres with Chandler-Gilbert Community College, Mesa Community College, the ASU Preparatory Academy (a K-12 charter school) and the Silvestre Herrera Army Reserve Center. These entities comprise what is known as the Williams Campus.



The Polytechnic campus (Poly), originally opened in 1996 as ASU East, is now home to 10,000 students enrolled in over 40 degree programs with a focus on applied engineering. Drawing on the suburban campus setting, Poly has embraced project work and partnerships with business to challenge students with real problems to be solved in small group settings. Students have direct experience with companies while also serving the community at large. Examples of this collaboration include: e-Projects, Global Resolve, and participation in the National Science Foundation's (NSF) Revolutionizing Engineering Departments (RED) Program.

E-Projects are project-based challenges defined by industry partners and solved by student teams working under the expertise of faculty members. Each e-Project involves an interdisciplinary team of four to eight students who work together for either a semester or academic year, depending on the complexity of the project. The industry partner commits to funding the materials, equipment and other expenses needed to complete the project. Most importantly, the partner provides a project liaison who works with the students to develop detailed project requirements, exchange information, negotiate changes, and present interim and final results. In turn, the partner receives full access to all project outcomes and results.

Another program based at the Poly campus is Global Resolve which was established in 2006 as a social entrepreneurship program designed to enhance the educational experience of ASU students by involving them in projects that directly improve the lives of underprivileged people globally. The idea for Global Resolve began as a conversation in 2005 between four ASU professors who recognized the need for a multicultural, multidisciplinary approach (combining engineering, business and global studies) to encourage sustainable economic development in the developing world. Through Global Resolve, ASU students and faculty collaborate with international universities, residents of rural villages, local governments, financial institutions, and nongovernmental organizations (NGOs) to develop and disseminate no-tech, low-tech, and high-tech solutions that address pressing public health or environmental needs. Since its inception, Global Resolve has engaged more than 500 students in such projects. They contribute annually to almost 50 projects, in 10 countries, that focus on upgrading community infrastructure and

resources in addition to boosting local economies. Global Resolve's progress has driven interest in establishing a humanitarian engineering program where students major in traditional areas of engineering with a concentration in addressing humanitarian needs.

In addition to the project based work above, the Polytechnic School was selected to receive \$2 million as part of the National Science Foundation's (NSF's) Revolutionizing Engineering Departments program, known as RED. ASU received one of only six RED grants awarded by the NSF for its project, titled

"Additive Innovation: An Educational Ecosystem of Making and Risk Taking," focusing on the manufacturing engineering program. The RED project will build upon successful innovations in the current programs' project-based sequence to improve the entire undergraduate experience, including technical core courses — such as mechanics and electrical theory — taught during sophomore and junior years. Over the next five years, the team will identify the current engineering education ecosystem and engage with faculty, students and industry partners to determine opportunities for improvement. This process will result in workshops for faculty to share tools and techniques to empower them to reinvent their own courses. These activities will directly support an additive innovation process that will evolve over time to benefit all students, faculty and industry partners on an ongoing basis.

Overall, the ASU Polytechnic Campus has created a vibrant community with proximity to industry partners as well as the local community. In addition to having over 10,000 students and its innovative academic programs, the campus provides community outreach programs to inspire the next generation of learners. These programs include the Fulton Schools Summer Academy, engineering and technology summer camps for K-12 students; the SPARK App League a mobile application development competition for K-12 students; and DiscoverE Day which is an open house for 3rd through 8th grade students. These are all examples of how ASU takes responsibility for the communities it serves by connecting talent, place, and innovation around its campuses.

