make cool stuff with us
for 4th-12th grade engineers & makers

Build, code, make, engineer, solve problems, have fun and learn to make the world a little better.
engineering.asu.edu/camps
connect with the Fulton Schools

“Your future is calling and it looks pretty cool”

Join us at the Ira A. Fulton Schools of Engineering for on-campus activities, after-school programs and summer camps. You’ll meet and work with our fantastic faculty, staff and students. We want you to become technically savvy, able to solve big problems, make the world better and have fun. Our goal is to show you just how cool engineering and technology is so that one day, you will join us at Arizona State University!

Engineering is everywhere you look, touches every area of our lives and brings us so many things that make life better. Join us and find out why we are so excited to be doing what we are doing that we can barely sleep! Come and discover how you can be part of creating the future.

Contact us for more info

For more information and to learn more about our K-12 Engineering programs visit outreach.engineering.asu.edu, email engineeringoutreach@asu.edu or call 480-965-0100.

“They love the hands-on stuff and making things. You have to let them see how their interests can translate into being a scientist or an engineer.”
– Sara, parent from Chandler about Engineering Open House

“I learned how to research things and how to experiment. That’s stuff I’ll probably use for the rest of my life.”
– Emma, 13, member of Team Toxic in the FIRST LEGO League

VOTED #1 place to make a mess and get away with it because you’re learning something cool.
—said every kid ever
Engineering Adventure: Renewable Energy
What does an energy engineer do? Explore the role of renewable sources for energy production. Make a model of solar, water, and wind energy production. Measure the electricity output from your energy production models. Harness renewable energy to “do work” by designing, building and testing a solar powered car and a windmill. Are you up to the challenge of lighting up “Sparkyville”—off the grid by generating your own electricity?

Entering grades 5-8
June 15-19
June 22-26 | Geared for Girls session
Cost: $225

Engineering Adventure: Mitigate the Urban Heat Island
As cities grow, humans change the natural environment into an engineered environment with buildings, parking lots and roads. What does this mean for living sustainably in city environments, especially our own desert city? How do we create livable environments for ourselves, the birds, geckos and other animals that share our neighborhoods? Investigate the causes and consequences of the Urban Heat Island through a variety of field studies and activities. Share your own experiences via photography. Are you up to the challenge of designing a physical model of a thermally efficient house? This program is offered in collaboration with the Global Institute of Sustainability.

Entering grades 5-8
June 1-5 | June 8-12 | Cost: $225

Engineering Adventure: Mechanical Animations
Have you wondered how pop-up greeting cards and wind-up toys work? Explore the role of force and motion in designing mechanical animations. Using 2-D mechanical linkages, constructed from pegboard strips and boards and joined by pivots, make mechanisms with specific movements. Integrate art to creatively make your own mechanical animations and automata. See the Polytechnic campus section for additional sessions.

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June 22-26
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Adventure in Computing

Learning to program requires a base of conceptual understanding followed by language-specific syntax and data handling. This beginner course bridges the gap, first covering broad object-oriented programming concepts common to modern programming, then building on that foundation with an overview of Python language. Your new coding skills will be polished through hands-on exercises and mini applications.

Entering grades 9-12
June 15-25
Cost: $625

Game Camp

Hosted by the Ira A. Fulton Schools of Engineering, Game Camp is a unique, hands-on opportunity for middle and high school students to learn intensive video game creation, visualization and production. You will use the latest software, hardware and development tools to create concepts and prototypes for 2-D and 3-D video gaming. Student to instructor ratios are very low in game camp; Professor Kobayashi and one TA for every 10 students makes it a very focused, individual experience.

Entering grades 7-9  | June 1-12
Entering grades 10-12  | June 15-26
Cost: $650

FIRST LEGO League Camp

This camp is a full-day camp where teams of students work their way through the 2014 FLL World Class robotics missions. Along the way you learn basic to intermediate EV3 programming and mechanical design. The week culminates with an FLL-style robotics tournament and awards ceremony. T-shirts and certificates will be provided. See the Polytechnic campus section for additional sessions.

Entering grades 4-5 | June 1-5
Entering grades 6-8 | June 8-12
Cost: $225

Robotics Camp 7Up

In ASU Summer 7Up RobotCamp, students will start to learn programming using Alice programming environment with 3-D animation, movie and game development. Then, students will design and construct robots, learn NXT-G robotics programming, and participate in a robotics challenge similar to FIRST LEGO League (FLL) Robotics Competition.

Entering grades 7-8
Exceptional students entering grade 6 will be considered.
June 1-12  | Cost: $600

Robotics Camp 9Up

This camp prepares high school students for a science and engineering career or degree program. It uses robot construction and programming as a vehicle to teach the latest engineering design concepts and computing technologies. The program will cover Microsoft Robotics Studio, robot construction, VPL programming, C# programming, Web programming in Service-Oriented Computing, phone app programming and a robotics challenge.

Entering grades 9-12
June 15-26  | Cost: $600

Tempe campus
High School Engineering Research Program
The High School Engineering Research Program provides hands-on experience in engineering research labs. Students learn about engineering fields, work on projects that benefit society, meet ASU faculty and graduate students and clarify future goals and aspirations. Students work in campus research labs on projects that benefit society, while learning more about the different disciplines of engineering. See the Polytechnic campus section for additional sessions.

Entering grades 10-12
4-week sessions  |  June 1-26 or July 7-31  |  Cost: $225
8-week session  |  June 1-July 31  |  Cost: $550

Summer Engineering Experience: SEE@ASU
Get a taste of the university experience this summer: visit labs, meet faculty and work on teams solving real problems. You can play a major role in shaping the world of tomorrow—find out how at the Fulton Schools of Engineering at ASU.

Entering grade 12
July 5-12 or July 12-19
Cost: $600

To the Moon, Mars and Beyond!
Explore space for real! Join a team of scientists and engineers to explore missions, spacecraft and instruments used to find the largest canyons, deepest craters and highest volcanoes in our solar system. Then, travel beyond the solar system to explore stars, exoplanets, galaxies and more. Learn about current NASA missions by visiting science operations centers on ASU’s Tempe campus, while you design and build your own spacecraft for a mission to the planetary body of your choice.

Entering grades 6-8  |  June 8-19  |  Cost: $225

App Camp
High School App Camp 2015 will focus on developing apps for the iPhone. Camp participants will receive the skills and knowledge needed to create and deploy their apps on the Apple App Store. Course material will be covered using a hands-on approach that helps participants to learn fundamental concepts through practice. Camp participants enjoy one-on-one interaction with instructors in a small class settings. Some key topics include: Apple XCode, Objective-C foundations, user interface design, mobile application design and development considerations, interfacing with the web and foundations of debugging source code.

Entering grades 9-12  | June 29-July 11  |  Cost: $600

learn with us on the Polytechnic campus

S.T.E.M. 101
S.T.E.M. 101 is geared towards freshmen/sophomore students in high school and focuses on the use and understanding of the engineering design process and careers related to these fields. Hands-on activities and engineering principles of design will be used to engage students throughout the day.

June 1-2 and 9 | Entering grades 9-10 | Cost: $75

S.T.E.M. 201
S.T.E.M. 201 is geared towards sophomore/junior high school students with a focus on students interested in pursuing engineering fields. Campers will engage in rapid prototyping to develop solutions to real-world problems.

June 3-4 and 11 | Entering grades 10-11 | Cost: $75

S.T.E.M. 301
S.T.E.M. 301 is geared towards junior/senior high school students who intend to pursue engineering fields. It includes use of engineering design labs, materials and equipment. Camp will take place at ASU Innovation Center. Additional cost and parental consent required.

Entering grades 11-12 | June 5 and 12 | Cost: $150

Ultimate Technology Boot Camp
Do you have what it takes to spend 10 days hacking at technology at ASU's Polytechnic campus? Learn from award-winning faculty and instructors how to create mobile apps, develop cutting edge games, design and build robots and more. Work together in teams to learn design, development and content integration for software like games and apps. The camp is completely residential and tuition includes camp fees, room and board and exciting site visits.

Entering grades 9-12 | June 8-19 | Cost: $1,700

Residential program
Summer Transportation Institute

The Summer Transportation Institute is a three-week residential program that explores what engineers do to make our transportation system work effectively and safely. Students learn how traffic engineers plan and maintain transportation systems through behind-the-scenes tours and meetings with professional engineers from around the state.

Entering grades 10-12
July 6-10, July 13-17 and 20-24
Cost: Free | Residential program

The Art of Invention: Introduction to Making and Tinkering

Students can create, tinker and imagine new ideas in unique week-long summer sessions. Students are introduced to building and prototyping from low-fidelity to using rapid prototyping tools (including use of an electronic paper cutter and a MakerBot Mini 3-D printer) to make their ideas real. Hands-on activities offers students the chance to learn new making and building skills.

Entering grades 6-8 | June 8-12 | Cost: $300
Entering grades 9-12 | July 6-10 | Cost: $300

The Art of Invention: Design Thinking and Creative Problem Solving

This session will introduce students to the steps that inventors and engineering designers use to imagine, create and quickly prototype innovative solutions to everyday problems. The hands-on approach will emphasize approaches to problem identification and problem solving along with a survey of tools such as needfinding and empathy, brainstorming, synthesis, rapid prototyping, and visual communication. Students will work in teams to create and present their inventions.

Entering grades 6-8 | June 1-5 | Cost: $300
Entering grades 9-12 | June 29-July 3 | Cost: $300
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Cost: $225

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Entering grades 5-8 | Cost: $225
June 1-5
June 8-12

**High School Engineering Research Program**

The High School Engineering Research Program provides hands-on experience in engineering research labs. Students learn about engineering fields, work on projects that benefit society, meet ASU faculty and graduate students and clarify future goals and aspirations. Students work in campus research labs on projects that benefit society, while learning more about the different disciplines of engineering. [This program is also available on the Tempe campus, see Tempe section for details.]

Entering grades 10-12
4-week sessions | June 1-26 or July 7-31 | Cost: $225
8-week session | June 1-July 31 | $550

**Investing in our future**  We are grateful to former Motorola CEO Gary Tooker and his wife, Diane Tooker, for a key investment that has allowed us to make a major expansion of our outreach programs. The Tookers’ investment strengthens STEM outreach efforts through faculty endowments and partnerships with Arizona’s K-12 teachers and education leaders to improve high school graduation rates and student success in college. Their investment also supports public-private partnerships between industry and school districts geared to excite students about the opportunities in science and engineering.

**Make a world of difference:** Share this with a teacher or parent!