**What is U-Design?**

It is a fun, exciting science and engineering program for kids in grades 6—9. It is a hands-on laboratory and workshop experience, providing the opportunity to learn about science and technology by engaging in the real work of scientists and engineers: design, exploration, experimentation, and invention. U-Design lets a child think of their own ideas and build their own way-cool inventions. This is a challenging and creative program developed and taught by an outstanding team of experienced science and technology teachers who specialize in teaching engineering design to kids. We are offering three different workshops in July, each built around a series of design projects and science activities that involve very interesting problems. Also, students experience cutting-edge research and demonstrations by visiting College of Engineering faculty and students, such as those who are developing UAVs, Smart Lights, studying the Aurora Borealis and using light to activate and study the brain.

BU’s U-Design is based on a program established by UMASS Lowell in July 2000.
**Electrical & Mechanical Gizmos**

*Session 1 Only*, for current Grades 6 - 8
Electricity and electromagnetism are powerful things! Learn how they work and use them to wire circuits, make security systems, and design and build a secret candy safe with an electromagnetic lock and alarm system. Build a motor, and design your own invention, which could be a strobe light, a carnival game, or who knows what—your imagination is the only limit! This workshop includes a toolbox and materials for students to take home.

![Image of students working on electrical & mechanical projects](image1.png)

**Robo-Alley**

*Sessions 1 & 2*, for current Grades 7 - 9
Ever want to make a robot? It’s easier than you think! In two-person teams, you’ll build machines that react to their surroundings, and complete design challenges such as 3-D obstacle course races, search-and-rescue missions, and a final interactive competition (soccer, sumo battles, or other sports). We’ll be using the NXT Lego Mindstorms robotics kits for fun and easy building. No previous programming or building experience required—there will be progressive challenges for every level of expertise, even if you already own a Mindstorms kit!

![Image of students working on robot projects](image2.png)

**Flight School 101**

*Session 2 Only*, for current Grades 7 - 9
Want to know how planes fly or how rockets glide? How are balloons like boats? or why can’t we fly like birds? Through hands-on activities and design challenges, learn flight principles such as thrust, lift, and drag. Build, fly and crash your custom-designed gliders and rockets. You’ll put your designs to the test and compete for records such as longest airtime, greatest distance traveled, and highest altitude reached.

![Image of student flying a rocket](image3.png)

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**U-Design Program & Registration**

Program workshops are offered during two five day sessions in July:  
**Session 1**: July 10 - 14  
**Session 2**: July 17- July 21

**Tuition**: $425 for the first session and $400 for any additional session (Parents wishing to enroll multiple children in U-Design will also receive this discount).  
**A non-refundable deposit of $100 for each workshop is expected at the time of online registration for each student. Payments can be made only via credit card using DISC, MC or VISA.**

The U-Design Program will be held at the Boston University College of Engineering and will run from 8:30AM to 4PM Monday thru Thursday, and from 8:30 AM to 6:00 PM on Friday. **Students are required to bring a lunch each day.** The program concludes on Friday afternoon with a family pizza party and presentation from 4:30 to 6:00PM. The pizza party and a U-Design t-shirt are included in the tuition cost. Workshops also include materials for students to take home.

**Online Registration begins Wednesday February 1, 2017** and is limited to 20 students per workshop. The deadline and full tuition payment is due by **Monday May 29, 2017**.

Limited scholarships may be available for students who qualify for free or reduced school lunch. Please contact us by phone 617-353-6919 or by email u-design@bu.edu. For more information, contact Dr. Gretchen Fougere, U-Design Program Director.