2017 Middle School Summer Engineering Technology Program

Fundamentals of Engineering

Learn more about the field of engineering

- Introduction of engineering topics to future engineers
- Promotion of critical thinking through engineering activities
- Team building and competitive activities

Offered: Week 1: June 12-16; Week 2: June 19-23, and; Week 3: June 26 – June 30

Coordinator: Ali Zilouchian, Ph.D.

Schedule:

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<th>Day</th>
<th>Morning Session</th>
<th>Afternoon Session</th>
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| Monday  | • Meet and Greet
         | • Overview of the engineering majors and activities planned for the week
         | • Tour of Green Building                                                        | • Lesson on catapult structure and function (Mechanical Engineering)
         | • Activity                                                                       | • Activity                                                                        |
| Tuesday | • Towers                                                                        | • Mousetrap Cars
         | • Lesson on geometric shapes in structural engineering (Civil)                  | • Lesson on mechanical functions of a vehicle engine (Mechanical)
         | • Activity                                                                       | • Activity                                                                        |
| Wednesday | • Solar Boats
          | • Lesson on Bernoulli’s Principle and how to build a boat (Ocean)               | • Soldering
         | • Activity                                                                       | • Discussion on the details and uses of soldering (Electrical)
         |                                                                                   | • Activity                                                                        |
| Thursday | • Robot Arm                                                                     | • Helicopters
          | • Lesson on robotics and how the arm was created (Electrical/Computer)          | • Lesson on lift and aerodynamics
         | • Activity with the arm                                                          | • Activity                                                                        |
| Friday  | • Snap Circuits
         | • Create your favorite Signs with LEDs                                          | • Engineering Olympiad
         |                                                                                   | • Presentation of certificates                                                    |