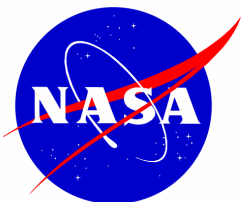


SAN DIEGO
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Sponsors:



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CONSORTIUM



San Diego City College MESA Program 2014 Arduino Design Competition

Objective: Demonstrate the use of Arduino technology in a “real world” application

Contestants: Six (6) four-person teams of City College MESA Program students, including a minimum of one (1) female per team. Each team will be mentored by a volunteer “coach” from Northrop Grumman.

Materials per team: One (1) SparkFun Inventor's Kit for Arduino - V3.1, plus up to \$80 in SparkFun components. The V3.1 Kit involves programming of the Arduino for fifteen fundamental circuits, including LEDs, Potentiometer, Push Buttons, Photo Resistor, Temperature Sensor, Servo Motor, Flex Sensor, Buzzer, Relays, Shift Register and LCD.

2014 Timeline (tentative):

August 11, 11 am – 1 pm ♦ Team kickoff @ Northrop Grumman

A contest overview will be presented; kits will be distributed; teams will be matched with coaches; and team leaders will be selected.

October 10 ♦ Order additional SparkFun components

December 3, 2 pm – 4 pm ♦ Arduino Symposium at City College

Teams will deliver a 15 minute PowerPoint presentation, including a 2-3 minute video demonstration. Presentations will be judged by Northrop Grumman volunteers.

Team Scholarships – sponsored by Northrop Grumman:

1st Place - \$1,000

2nd Place - \$500

3rd Place - \$250

Additionally all participants and coaches will receive commemorative polo shirts.

Intellectual Merit – participants will be exposed to the use of Arduino technology, including the programming of an Arduino in basic electronic circuits. Additionally, participants will gain experience in teamwork and presentation skills, and, mentored by a Northrop Grumman coach, they will gain an understanding of the engineering design and build process.

Broader Impacts – this design competition will be disseminated broadly at local, regional, state and national levels. Locally, the Arduino Symposium will be promoted to students in the MESA Program, at City College, and at Garfield and San Diego High Schools. Regionally, this Arduino competition model will be disseminated to the San Diego MESA Alliance, including San Diego State University, Southwestern College, and MESA pre-college programs in San Diego and Imperial Valley. Statewide, the Arduino competition model will be disseminated to MESA statewide programs and the California Space Grant Consortium. Nationally, the Arduino competition model will be disseminated to MESA USA and national Space Grant Consortiums, sponsored by NASA.