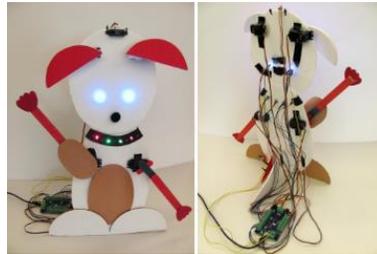


Microcontroller/Programming Workshop

April 10 - 12, 2017
8 a.m. – 4:30 p.m.

WHRO-TV
5200 Hampton Boulevard
Norfolk, Virginia 23508



Get your students to code and program robots through two different approaches to programming:

- Graphical method with the Hummingbird microcontroller which uses the Scratch graphical programming environment.
- Arduino microcontroller using the text-based Sketch (which is C/C++ - based). Heavy integration of the Arduino support eco-system, which is available online, will be presented to ensure access to continued support for ideas beyond the duration of the course.

Designed to support educators from middle school through high school along the total spectrum of readiness for dealing with the complexities of programming languages. There should be something useful and engaging for novices through advanced learners with programming experience.

Course features integration of data acquisition from classroom-based renewable energy sources such as model wind turbines and photovoltaic solar cells. Data on energy production will be monitored in real-time using a specialized Hummingbird shield designed for monitoring energy sources.

Teachers participating in this course should walk away with enough experience to begin using microcontrollers in their design briefs and projects with students. Additionally, teachers will know where to purchase hardware at a reasonable price for classroom use and they will know where to access help online to support their work going forward.

