



C-STEM 4-Day Workshop on Integrated Computing and STEM Education with Arduino and Robotics

Date:

Monday-Thursday
June 11- 14, 2018
8:30am - 4:30pm

Location:

Boise, Idaho

Take-home hardware:

each participant will receive full curriculum, software and hardware, including Arduino, to implement coding, making and robotics in their classroom

For more information, contact Finia Dinh, Computer Science Program Manager, Idaho STEM Action Center at: Finia.Dinh@stem.idaho.gov or contact info@c-stem.ucdavis.edu and visit <http://c-stem.ucdavis.edu/pdregister>

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This C-STEM 4-Day Workshop will provide K-14 teachers with hands-on experience on how to use freely available C-STEM Studio and RoboBlockly, as well as C-STEM Math-ICT curriculum with interactive coding, making, and robotics that aligns with the Common Core Math and ICT Sector standards to develop students' 21st century problem-solving skills and better prepare students for college and careers. Teachers will also learn physical computing using general purpose input/output (GPIO) pins on Arduino, control of Linkbot and NXT/EV3 robots through Arduino, and how to bring physical computing and free C-STEM resources into their classroom teaching of STEM, computer science, making, and robotics courses. Whether or not you have previous coding and robotics experience, you will enjoy the workshop enormously. This workshop focuses on:

Providing computing education utilizing user-friendly RoboBlockly, computer programming in C/C++ interpreter Ch, and Barobo Linkbot or popular Lego Mindstorms NXT/EV3

Implementing new teaching strategies and opportunities for personalized and collaborative learning through hands-on activities

Adopting Common Core State Standards Math compliant curricula with computing and robotics

Maker-friendly technology

A range of ideas for interfacing various hardware and software in the classroom using Windows, Mac, and Chromebooks.

Using GPIO pins on Arduino for sensory based control of Linkbots and/or Lego Mindstorms NXT/EV3.

Building circuitry using a breadboard for Arduino.

ChDuino for tinkering with the General Purpose Input/Output (GPIO) pins on Arduino board.

Using physical computing to interface electronic components like LEDs, buttons, and photo-resistors

Working to close the achievement gap and preparing students to be college and career ready