This C-STEM 2-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 with Raspberry Pi and Arduino, control of Linkbot and NXT/EV3 robots through Pi, 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 Raspberry Pi and Arduino for sensory based control of Linkbots and/or Lego Mindstorms NXT/EV3.
- Building circuitry using a breadboard for Raspberry Pi and Arduino.
- The GPIOViewer for tinkering with the 40 General Purpose Input/Output (GPIO) pins on Raspberry Pi and ChDuino for tinkering with the 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

For more information, please contact Karyn Torigoe, School Programs Manager, Great Lakes Science Center at: torigoek@glsc.org or contact info@c-stem.ucdavis.edu and visit c-stem.ucdavis.edu