Getting Started with the Raspberry Pi Pico Microcontroller

Workshop Overview:

The Raspberry Pi Pico is a tiny, fast, and versatile low-cost microcontroller that can be used to teach a variety of physical computing, computer programming and CIS concepts in fun and unique ways. In this workshop we will explore physical computing with the Raspberry Pi Pico and MicroPython as a Python based alternative to other microcontrollers like the Arduino. In the 2nd half of the workshop, we will explore how to use the

Raspberry Pi Pico to teach CIS topics such as web servers, MQTT, data logging, etc. We will utilize open source and free online tutorials that can be integrated directly into your courses right away, as a single assignment, a course module, or even a complete course.

Workshop is limited to 20 participants. A solid familiarity with the Raspberry PI or Arduino and basic Python programming is preferred but not necessary for those motivated to learn.

Equipment needed for this workshop:

One Raspberry Pi Pico Kit designed to be used with the Getting Started with the Raspberry Pi Pico Book. Make sure your Pico has headers. Examples include:

https://vilros.com/products/vilros-getting-started-with-micropython-on-raspberry-pi-pico-kit
https://vilros.com/products/vilros-getting-started-with-micropython-on-raspberry-pi-pico-kit
https://amzn.to/3JlTcZq

One Raspberry Pi Pico W or Raspberry Pi Pico WH, Examples include:
https://amzn.to/3Ful10n
https://www.sparkfun.com/products/20173
https://vilros.com/collections/raspberry-pi-boards/products/raspberry-pi-pico-wireless
https://www.pishop.us/product/raspberry-pi-pico-w-with-pre-soldered-headers/
https://www.pishop.us/product/raspberry-pi-pico-w/

Instructor: Kerry A. Bruce My name is Kerry A. Bruce. I have owned and worked with computers/networks since 1982, starting with the Commodore VIC-20 & Commodore 64. I worked in the IT Industry for 25+ years in system administration and networking spending time with small businesses, Citibank, Sandia National Labs, and finally owning an IT consulting firm for 11 years. I have been a community college instructor for the past 10 years where I teach CompTIA A+, Network+, Security+, and Cloud+, Microsoft Server, Cisco Networking, and IoT/Robotics courses at Central New Mexico Community College in Albuquerque, NM. From an IoT standpoint, I have been using the Raspberry Pi in my classroom since the Raspberry Pi Model B in 2012. I am a Raspberry Pi Certified Educator, have conducted over 2 dozen Raspberry Pi related workshops for teachers and instructors, have taught an Internet of Things course at CNM for the past 6 years, and I am the faculty sponsor/mentor for the CNM student group HackerSpace and the CNM Robotics Team that uses a student designed and built Raspberry Pi based robot that competes in PiWars in Cambridge, UK each spring... pre-COVID.

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