WASTC 2019 Faculty Development Weeks

IoT Fundamentals: Connecting Things, Instructor Training

Dates: In Person June 10 – 14, 2019 Cabrillo College, Aptos CA

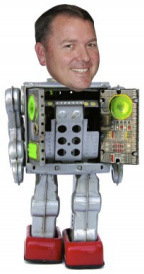
This course introduces instructors to the "Internet of Things" (IOT) and how physical real-world devices, "things," are increasingly being connected to, visible through, and controllable via the Internet and web technologies. In this course, we will introduce the instructors to the System on a Chip (SOC) technology known as the Raspberry Pi, Microcontrollers in the form of Arduino, physical computing, Python programming, and connecting devices to the Internet via twitter, Gmail, and other various means. The course will enable and equip the audience to build and teach how to build IOT projects, products, and solutions. This course is ideal for those who are interested in exploring the possibilities of Internet of Things using the Raspberry Pi and Arduino. We will touch on many of the necessary software, hardware, platform, protocols, etc. to teach your own Raspberry Pi/Arduino based IOT course. Additional study/support materials will be provided for a comprehensive deep dive on your own after the course concludes.

The Cisco Networking Academy's IoT Fundamentals curriculum provides students with a comprehensive understanding of the Internet of Things (IoT). It develops foundational skills using hands-on lab activities that stimulate the students in applying creative problem-solving and rapid prototyping in the interdisciplinary domain of electronics, networking, security, data analytics, and business. The student-centric approach translates into the student being able to ideate, design, prototype and present an IoT solution for an identified business or society need.

This session will focus on the Cisco course, Connecting Things, which focuses on identifying, designing, prototyping, and presenting an IoT solution that securely solves a current business or social problem.

Connecting Things students should have a basic understanding of how to network devices in a LAN and connect them to the internet; an ability to solve basic algorithmic problems using a programming language; and a familiarity with Cisco Packet Tracer.

Instructor:



Kerry A. Bruce is a community college instructor and Raspberry Pi Certified Educator who teaches Computer Information Systems courses at Central New Mexico Community College in Albuquerque, NM. Kerry is also the founder and faculty adviser for the CNM HackerSpace, a collaborative space designed to foster creativity, experimentation, and discovery of any and all technology related interests the students may have. The CNM HackerSpace is home to many student opportunities to learn, including Raspberry Pi workshops, several robotics teams, Cyber Olympics, Gameathons, Open Source 3D Printing, supercomputing, plus PC building, networking and security. Additionally, Kerry has created and implemented a popular CIS course using the Raspberry Pi to teach the Internet of Things (IOT), Computer Science, and Computer Information Systems concepts at the community college level. Starting this fall the course will be a required course in 2 CIS degrees at CNM. Kerry's personal mission is to encourage and ignite the passion for learning through the acts of doing, tinkering, and making.

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