Lesson Plan: Raspberry Pi + Amazon Alexa



**Date:** 04/26/2016

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**Class:** #10-107-195 IT: Computer Support Training **Section:** #22597



**Goals:**

1. Introduce students to Amazon Echo and Alexa Voice Services
2. Provide a knowledge base for students to get started working with Alexa Voice Services
3. Demonstrate how Raspberry Pi General Purpose Input Output (GPIO) pins are used in building an Echo
4. Build a working Echo

**Objectives:**   
The students will gain knowledge/experience of the following:

1. Amazon Echo / Alexa Voice Services
2. Raspberry Pi GPIO Pins – Python programming language
3. Step-by-step building of the Raspberry Pi-Echo
4. Setting up an Amazon Developer Account / Alexa Voice Services
5. Setting up the Raspberry Pi-Echo User Environment
6. Setting up IFTTT (If This Then That) Recipes to expand Echo’s capabilities
7. Demonstration of Echo features

**Materials:**

1. Step-by-step guide on how to set up Alexa Voice Services
2. Raspberry Pi 2 – Echo device (including all parts necessary to build)
3. Power Point presentation, handouts

**Activities:**  
Lecture

1. Students will view a PowerPoint presentation outlining the set up and build of a Raspberry Pi-Echo and how to expand its functionality.
2. Question and answer after the presentation

Lab

1. Walk through the installation instructions provided in the PowerPoint and demonstrate the setup and build of the Raspberry Pi-Echo.

**Practice/Assessment:**  
Students will be evaluated on their knowledge on today’s Raspberry Pi presentation. Students will then evaluate the instructor’s effectiveness in delivering the presentation/information.