Course Title: Automation Engineering

In this hands-on self-paced course, students will design and build a system to automatically sort, store, and retrieve colored marbles. These systems are similar to those seen in large warehouses. The course uses the LEGO Technic building system and the LEGO Mindstorms EV3 hardware. Programming in Java, students use the Linux-based ev3dev firmware to provide advanced control of actuators and sensors. Furthermore, students learn how to set up a network connection between multiple devices in order to provide synchronized control of more actuators than one device can handle. This course teaches components of robotics, automation, embedded software and mechanical design.

Resources used: ev3dev-Java documentation and example code, videos and pictures of previous similar projects, advice from industry professional.