Quick Start Guide: QLabs Virtual Ball and Beam

STEP 1 Software Prerequisites

The QLabs Virtual Ball and Beam is compatible with **Windows 10 (64-bit)** and requires **MATLAB 2019a** or later with Simulink.
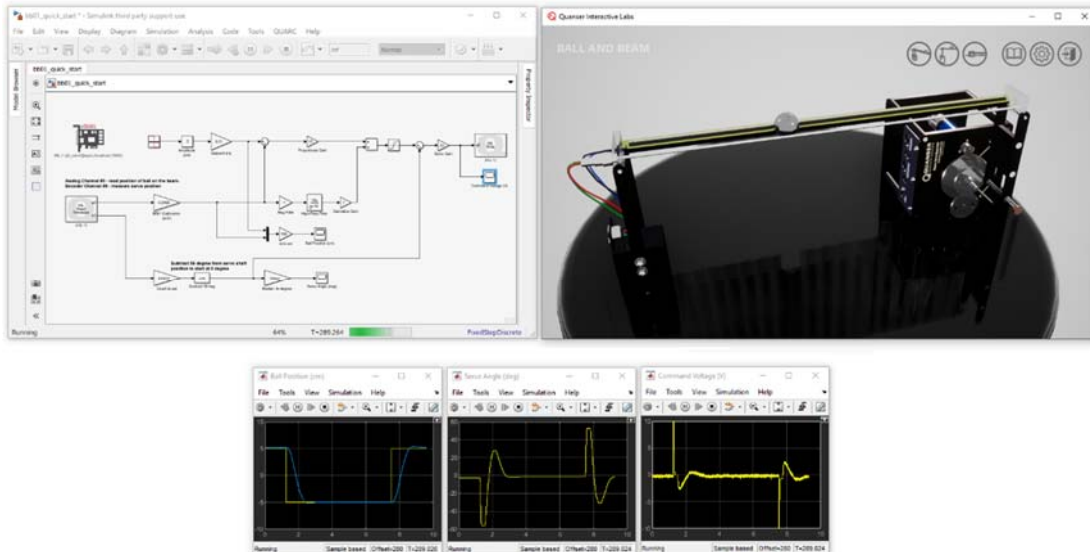
STEP 2 Register on Quanser Academic Portal

Visit the Quanser Academic Portal at https://portal.quanser.com/Accounts/Register. Follow the on-screen instructions to register and activate your account.

STEP 3 Download and Install QLabs

From the Quanser Academic Portal, download and install the latest version of the **Quanser Interactive Labs** (QLabs) for Windows application.

STEP 4 Testing the Virtual Ball and Beam

1. Open the **Quanser Interactive Labs** application and login using your account.
2. From the product list select **Ball and Beam**.
3. Select **Ball and Beam Workspace**. You should see a Virtual Ball and Beam as shown below.
4. Open the Simulink model **ball_beam_quick_start.slx**.
5. Open the scopes labeled **Ball Position (cm)**, **Servo Angle (deg)**, and **Commanded Voltage (V)** and run the Simulink model.
6. Once the model is running, the ball will start moving back and forth, tracking a ±5 cm displacement. Your responses should look similar to the following.
7. Stop the model.

STEP 5 Download Curriculum

To download the full student version of the QLabs Virtual Ball and Beam curriculum click on the *Open Content* icon in the app.

Still Need Help?   For further assistance from a Quanser engineer, contact us at tech@quanser.com