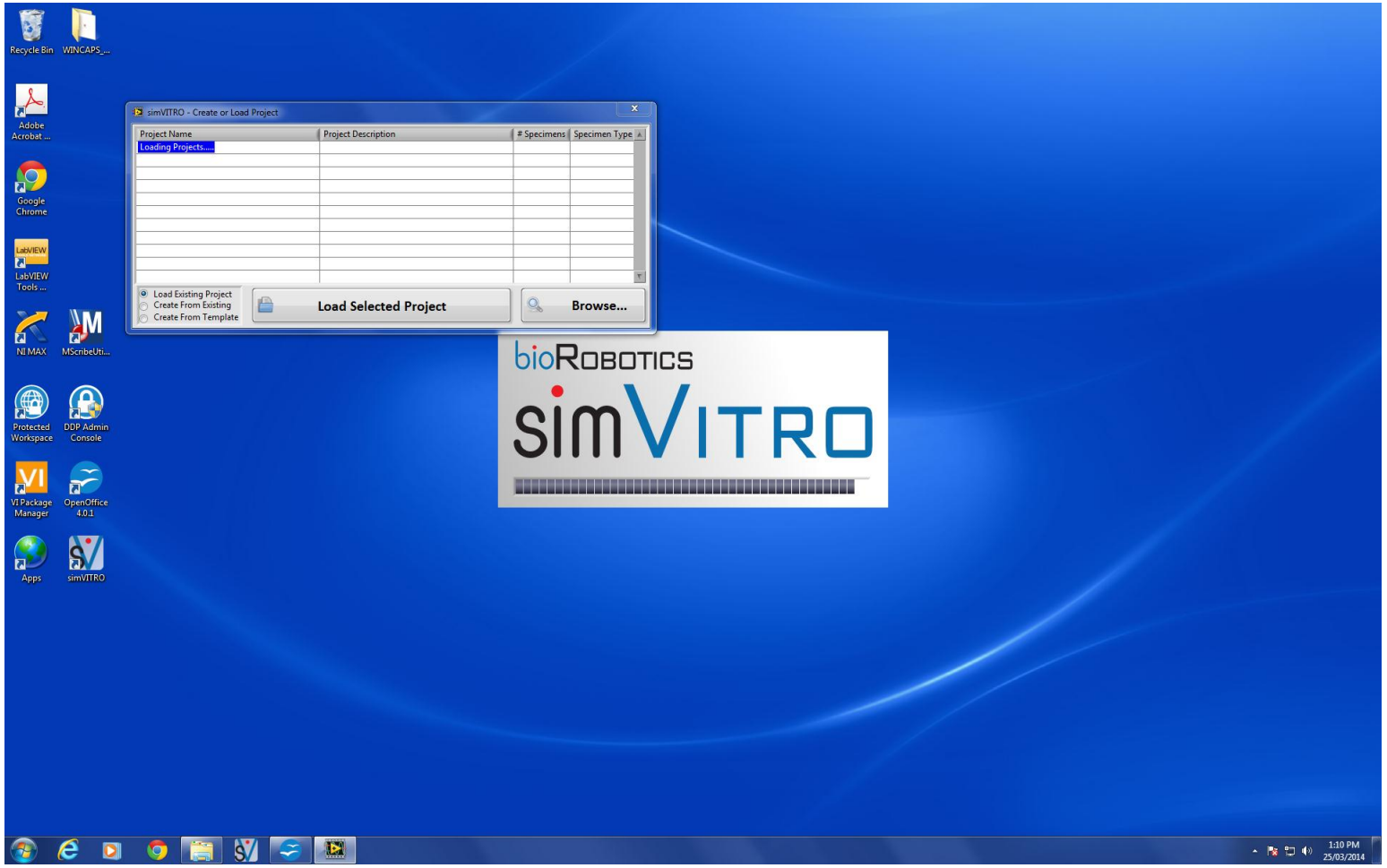
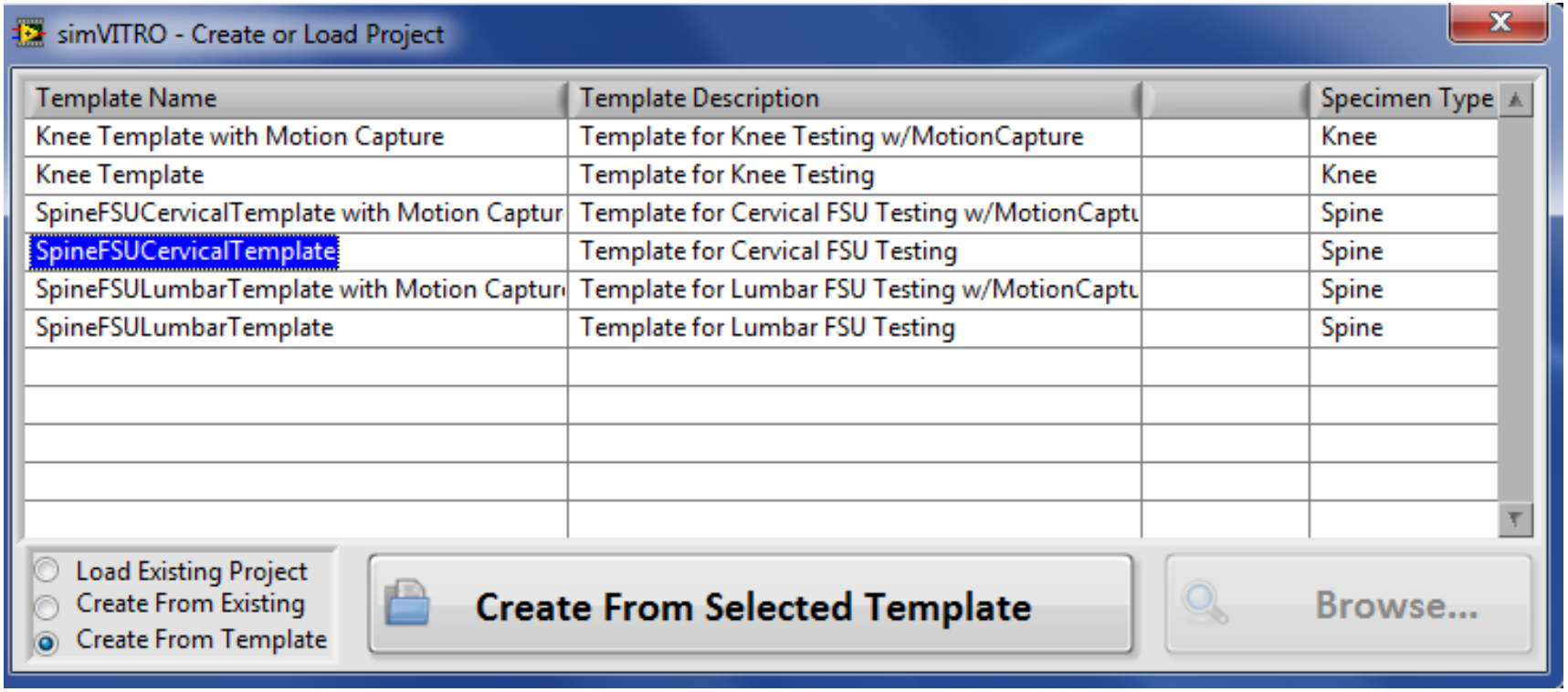
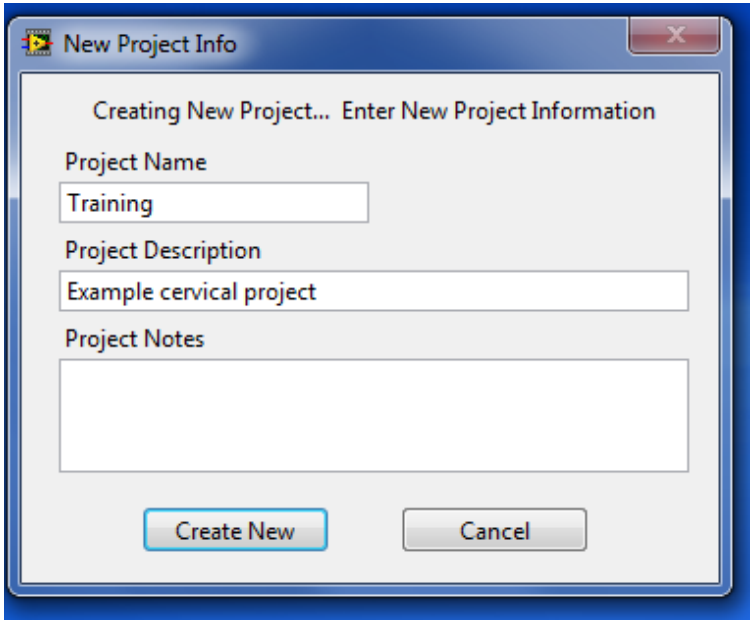
Opening simVITRO



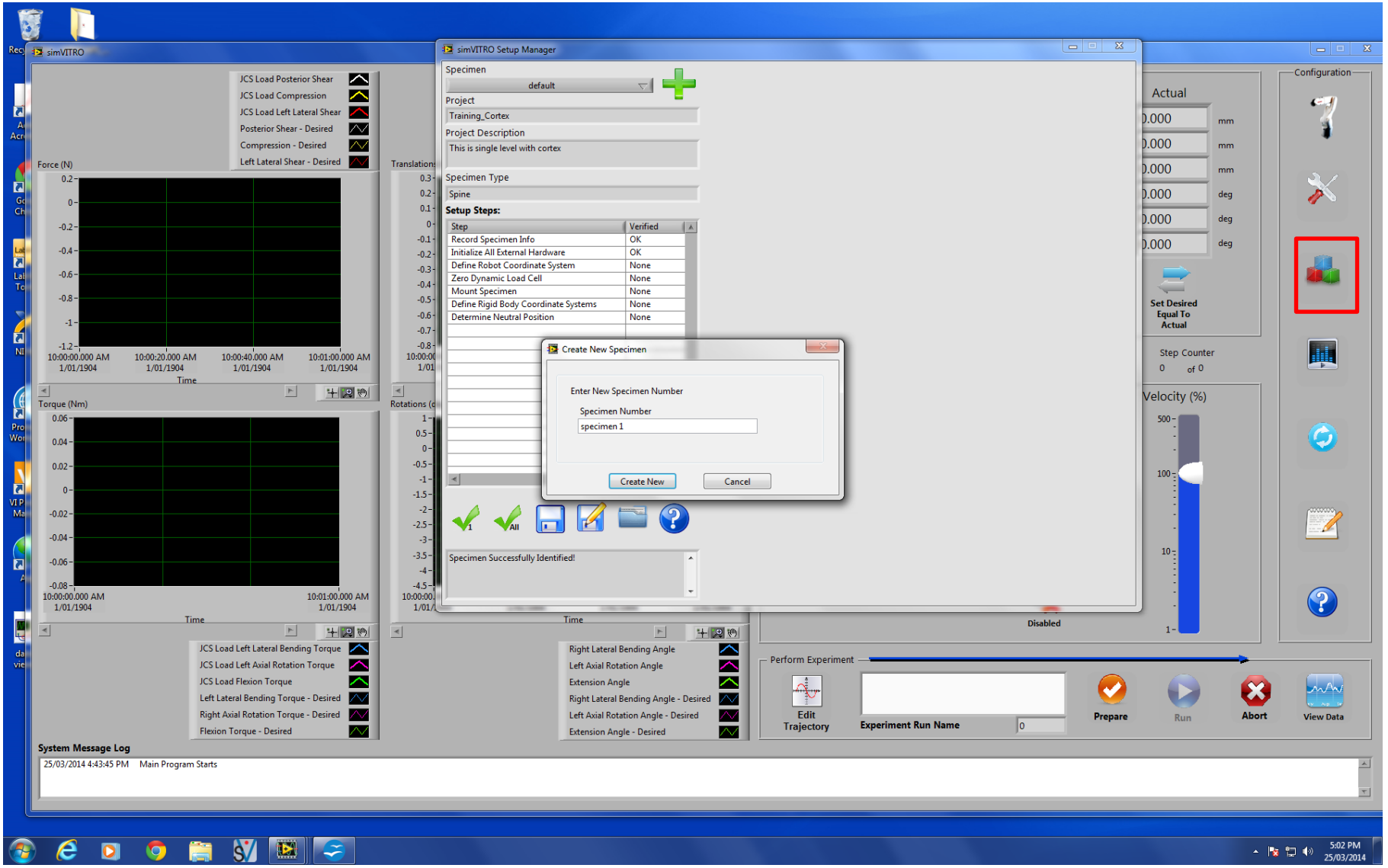
- Loading a project
  - Load existing project
    - Used most often (when testing a new specimen in an existing project
    - Click browse and navigate to project file
  - Create from existing project
  - Create from template



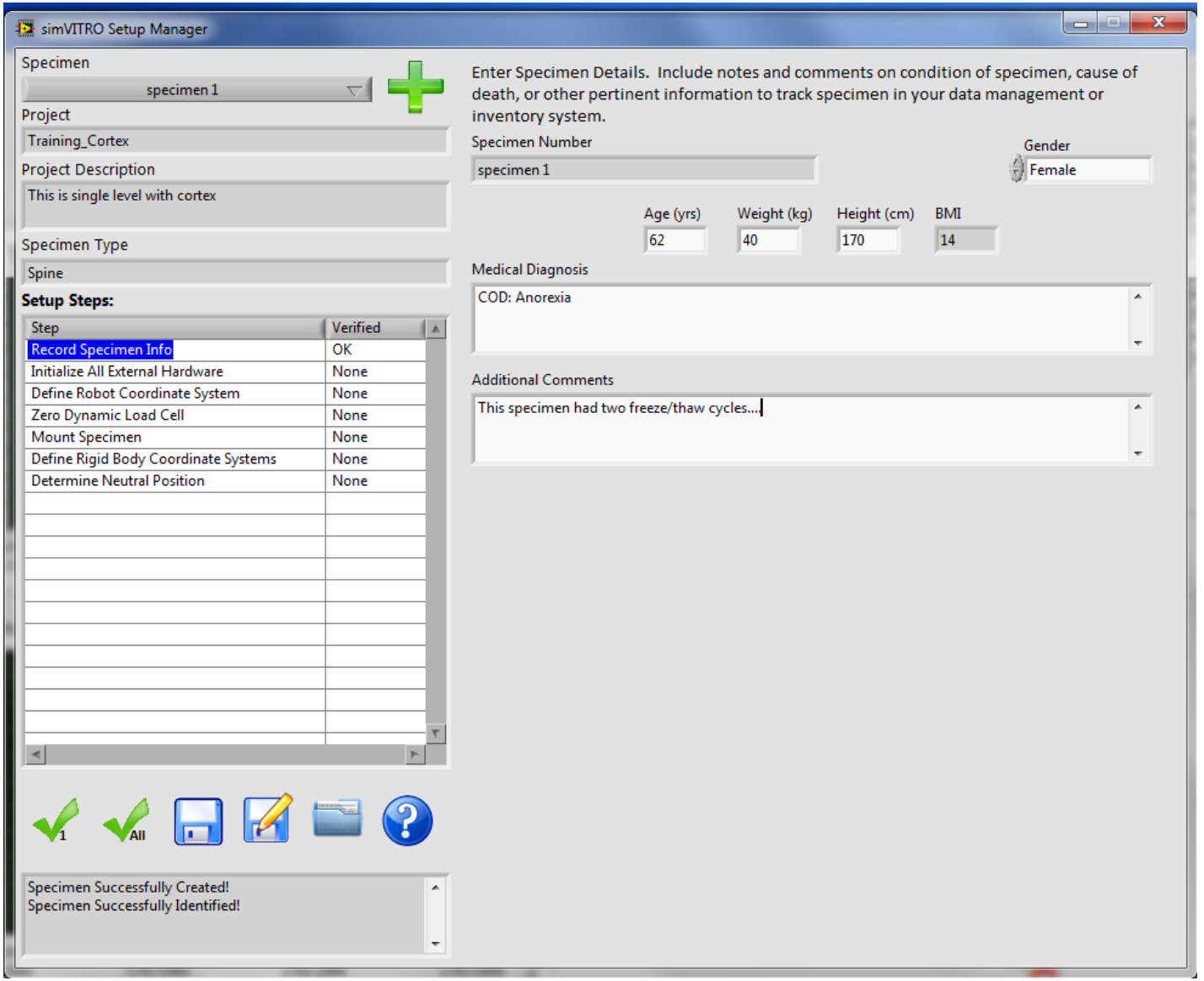
- When creating a new project, the following screen will appear
- Project Name and Project Description must be filled in
- A project folder will be created within D:\simVITRO



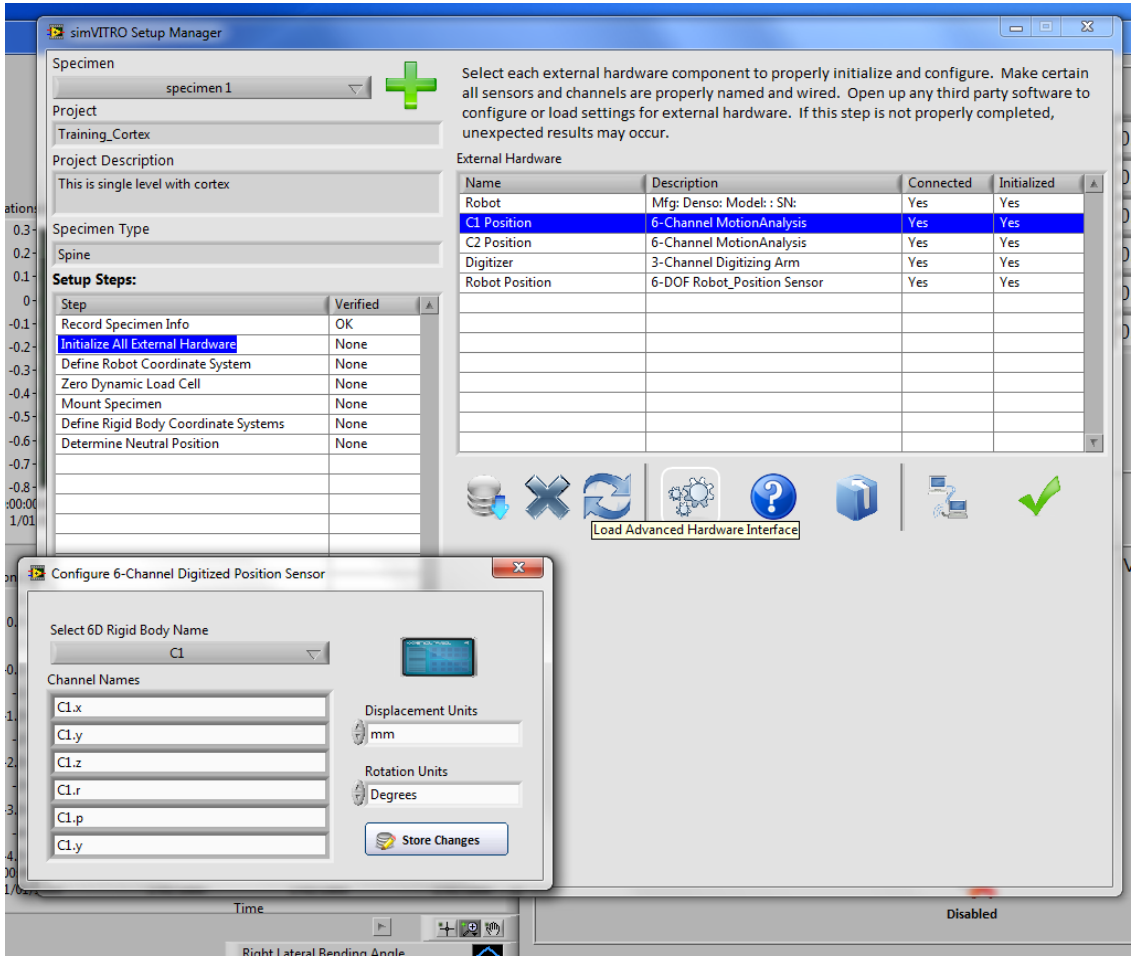
- Setup manager
  - Load a specimen or create a new one
  - After creating a new specimen, a folder will be created within the project folder



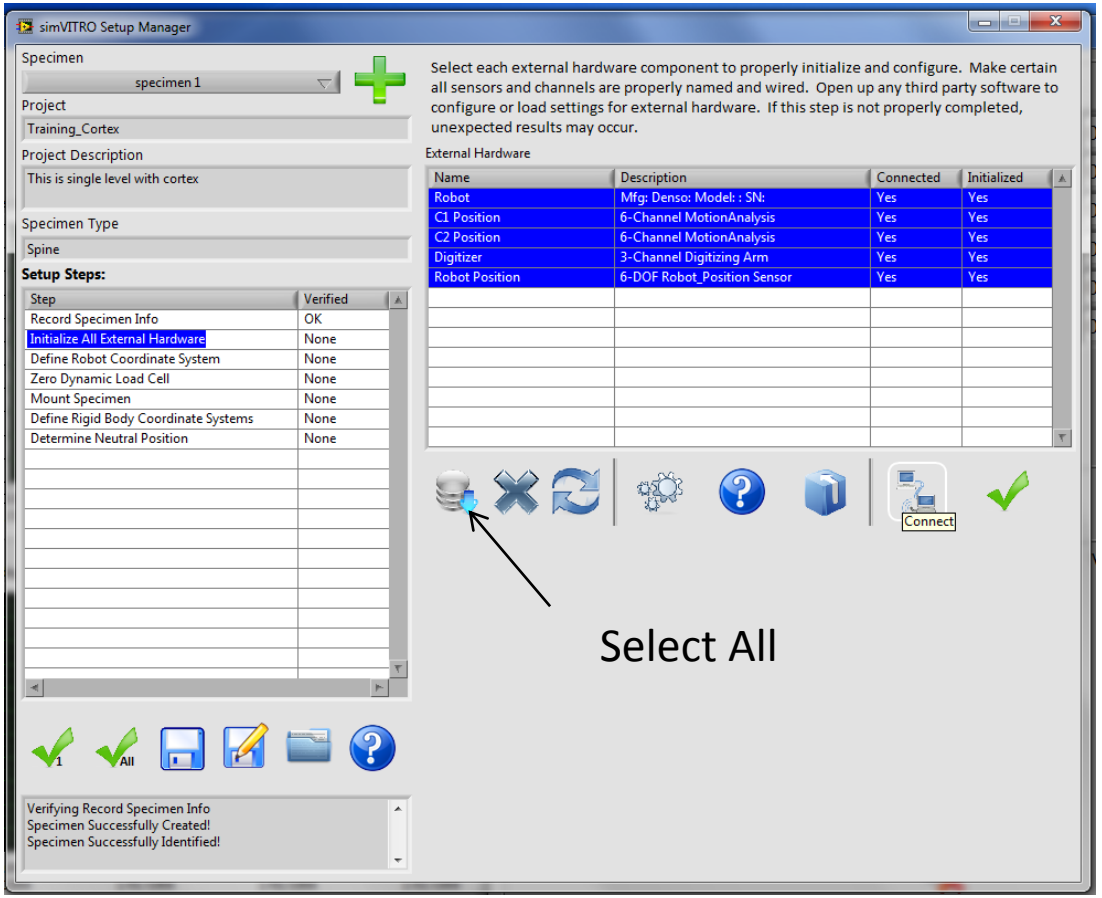
- Setup – Record Specimen Info
  - Click the check 1 on the bottom left when completed



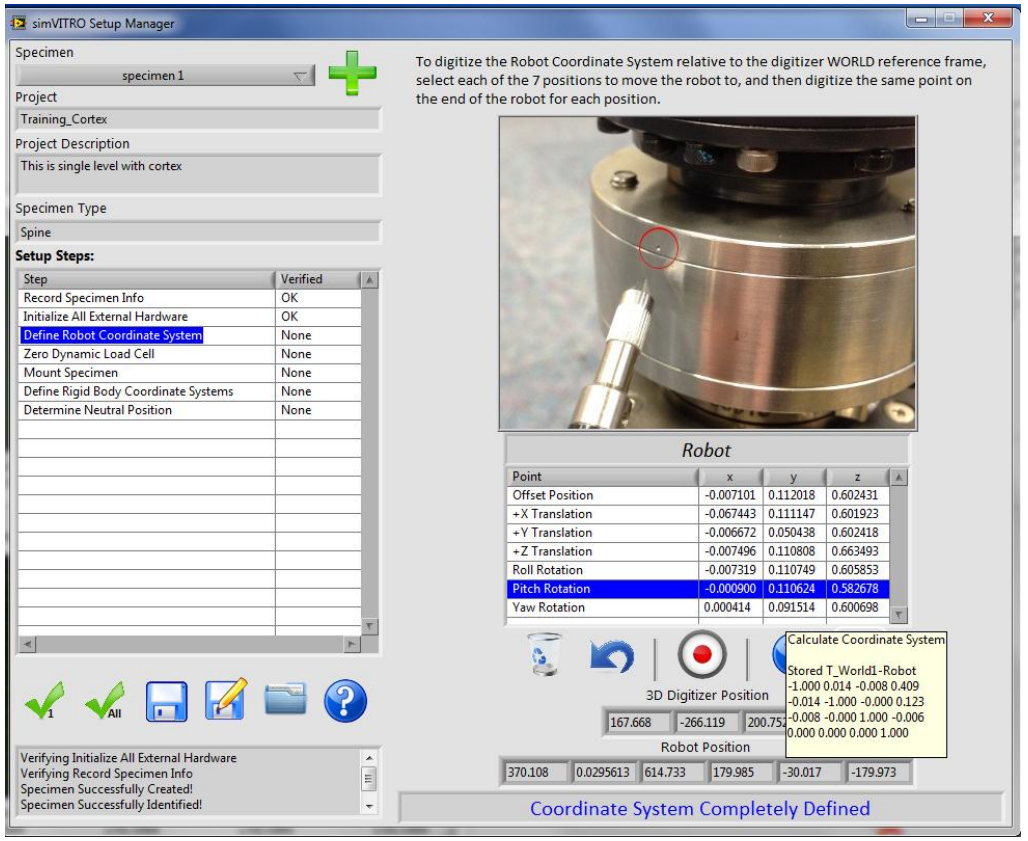
- Setup – Initialize all external hardware
  - All position sensors must be configured (microscribe and motion analysis)
  - Click the blue question mark for instructions



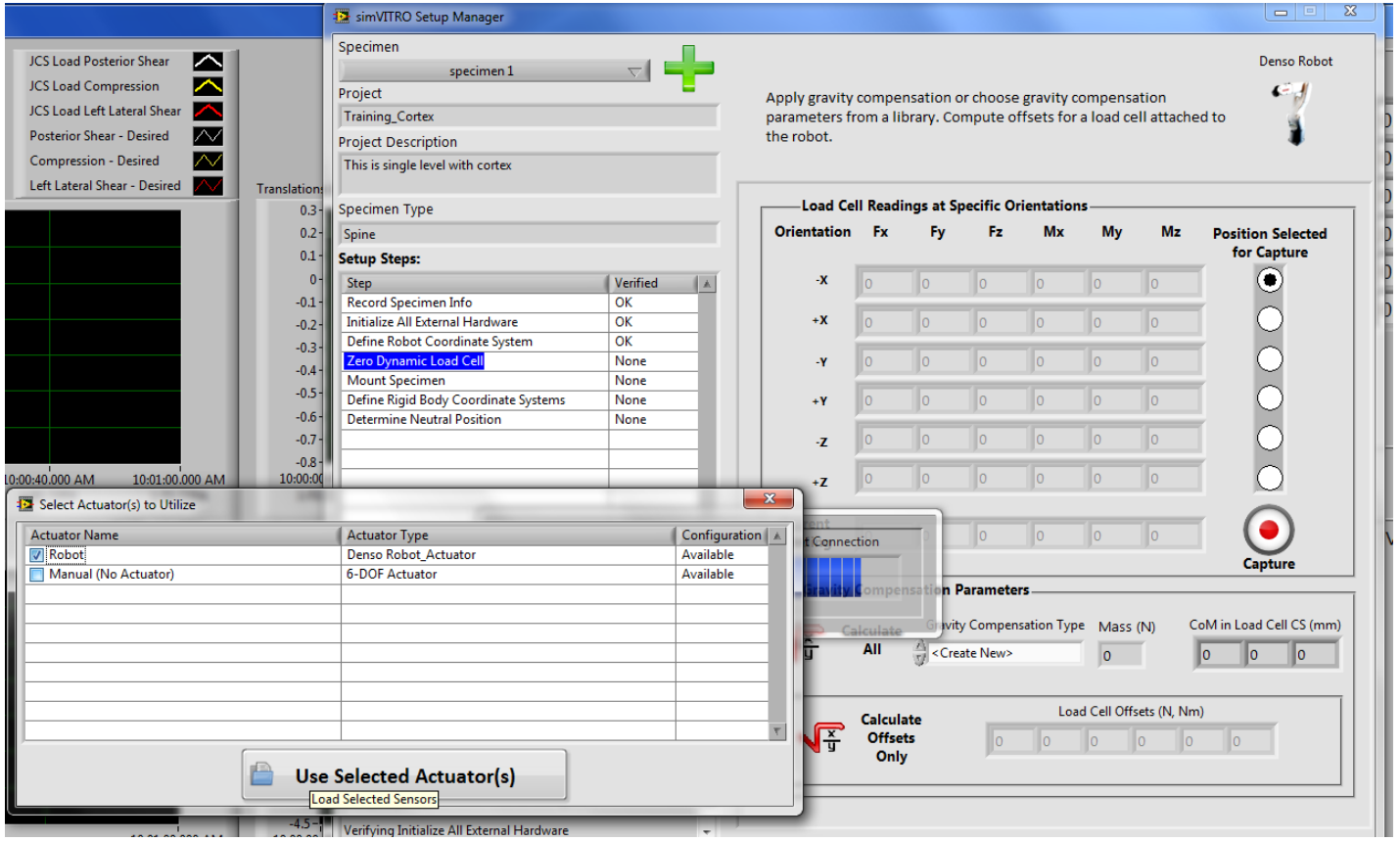
- Setup – Initialize all external hardware
  - After configuring the sensors, select all of them and click the connect button
  - If they all connect successfully, click the check button next to the connect button
  - Then click the check 1 button the bottom left



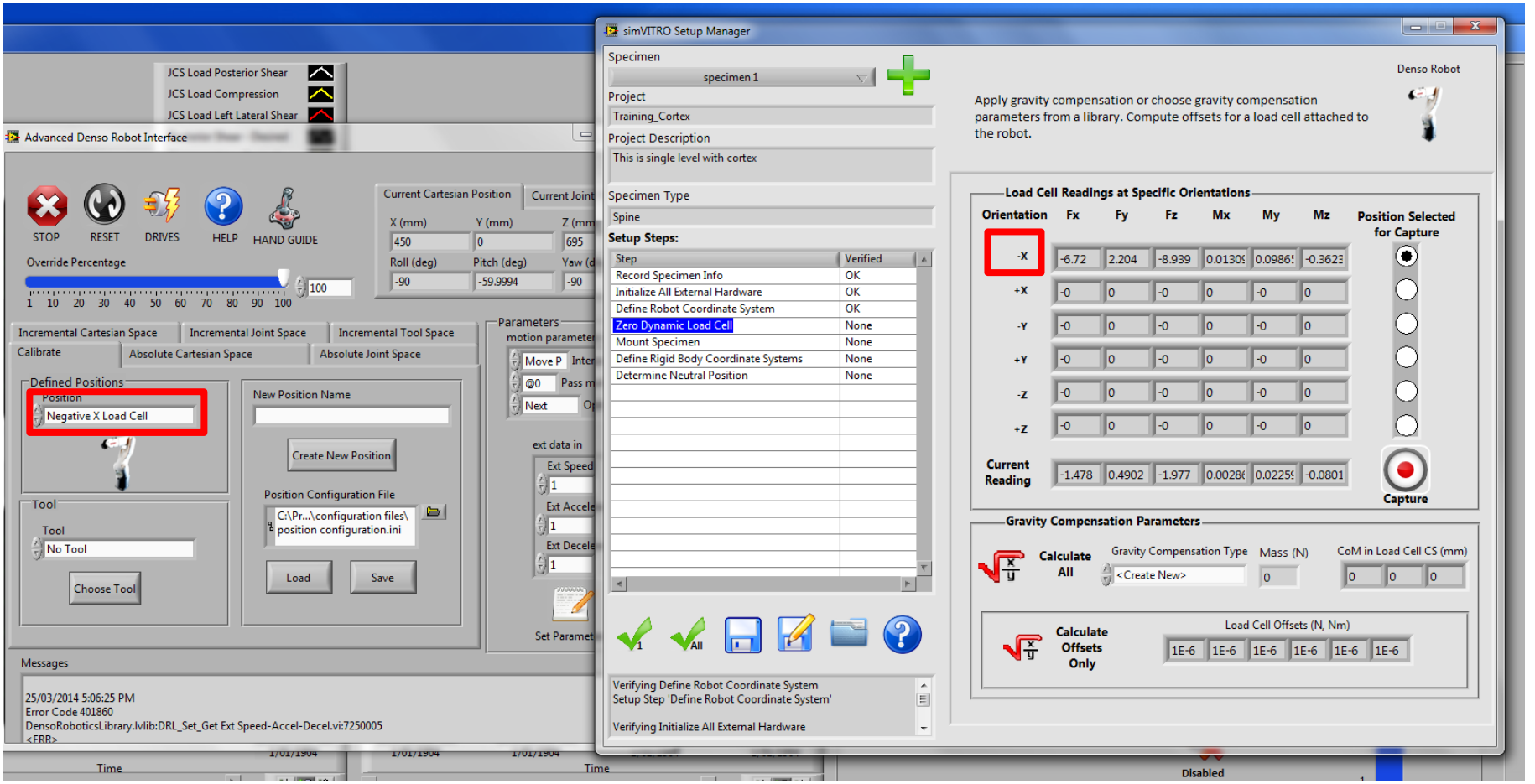
- Setup – Define Robot position
  - Select the point and the robot will move to the corresponding position
  - Place the microscribe tip on the divot below the robot end-effector and record a point
  - When finished recording all points, click the calculator and then the check 1 button



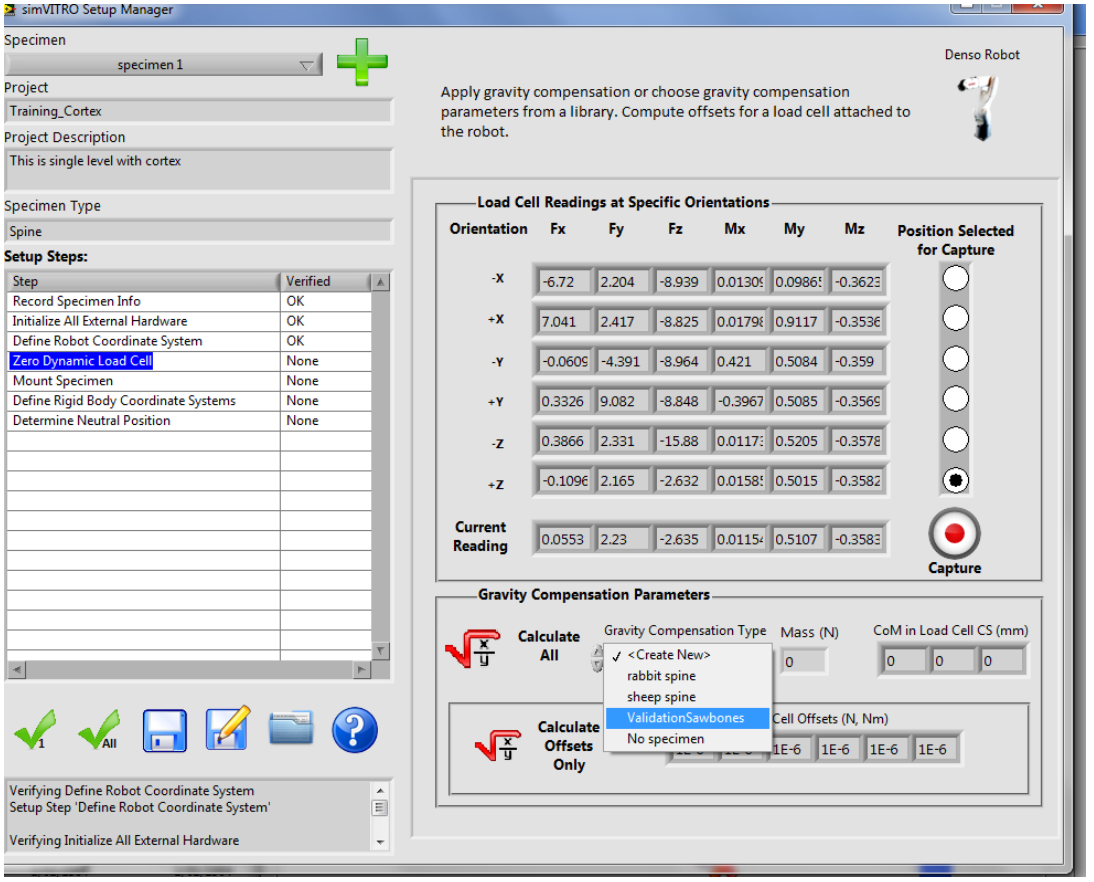
- Setup – Zero Dynamic Load Cell
  - Choose Robot and select the actuator



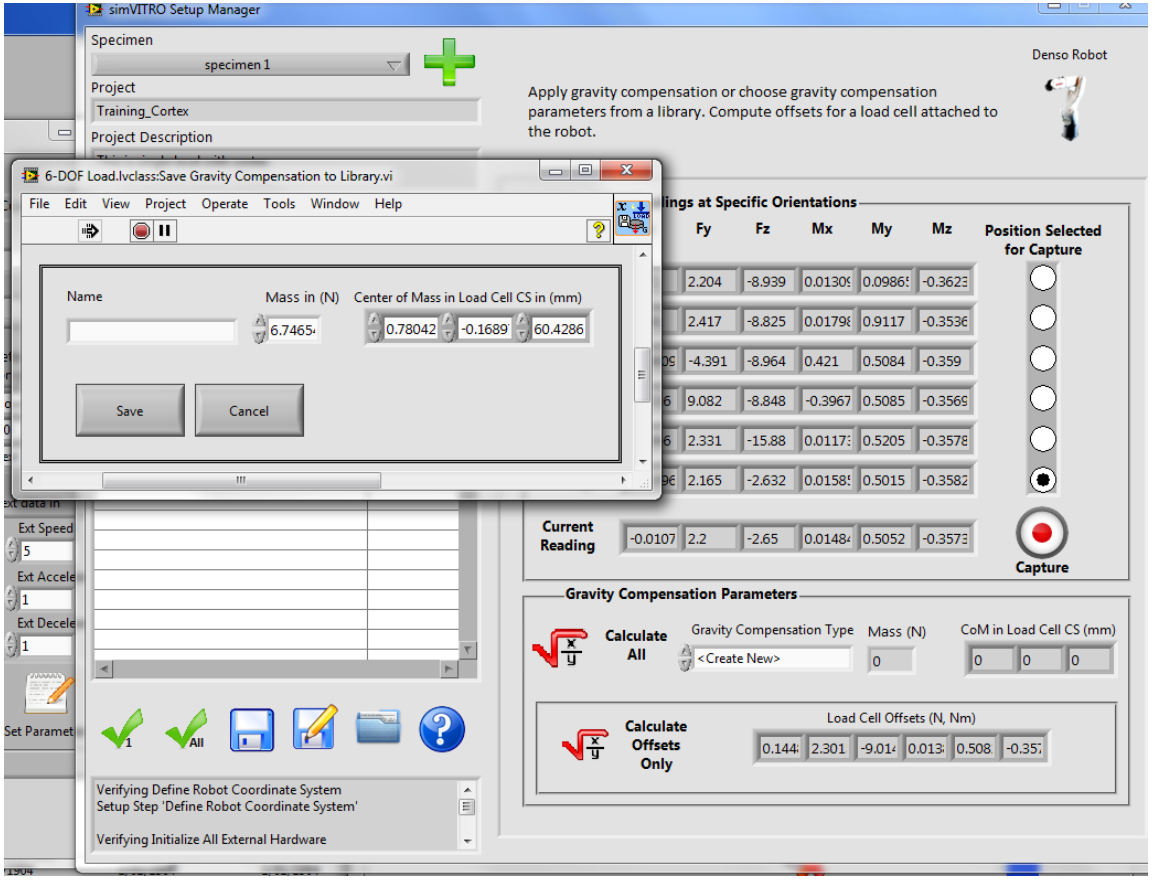
- Setup – Zero Dynamic Load Cell
  - In the calibrate tab of the advanced robot interface, send the robot to the predefined positions that correspond to the load cell position (i.e. Negative X Load Cell positions the load cell so the –x-axis is pointed down)
  - Capture the load cell output for each position



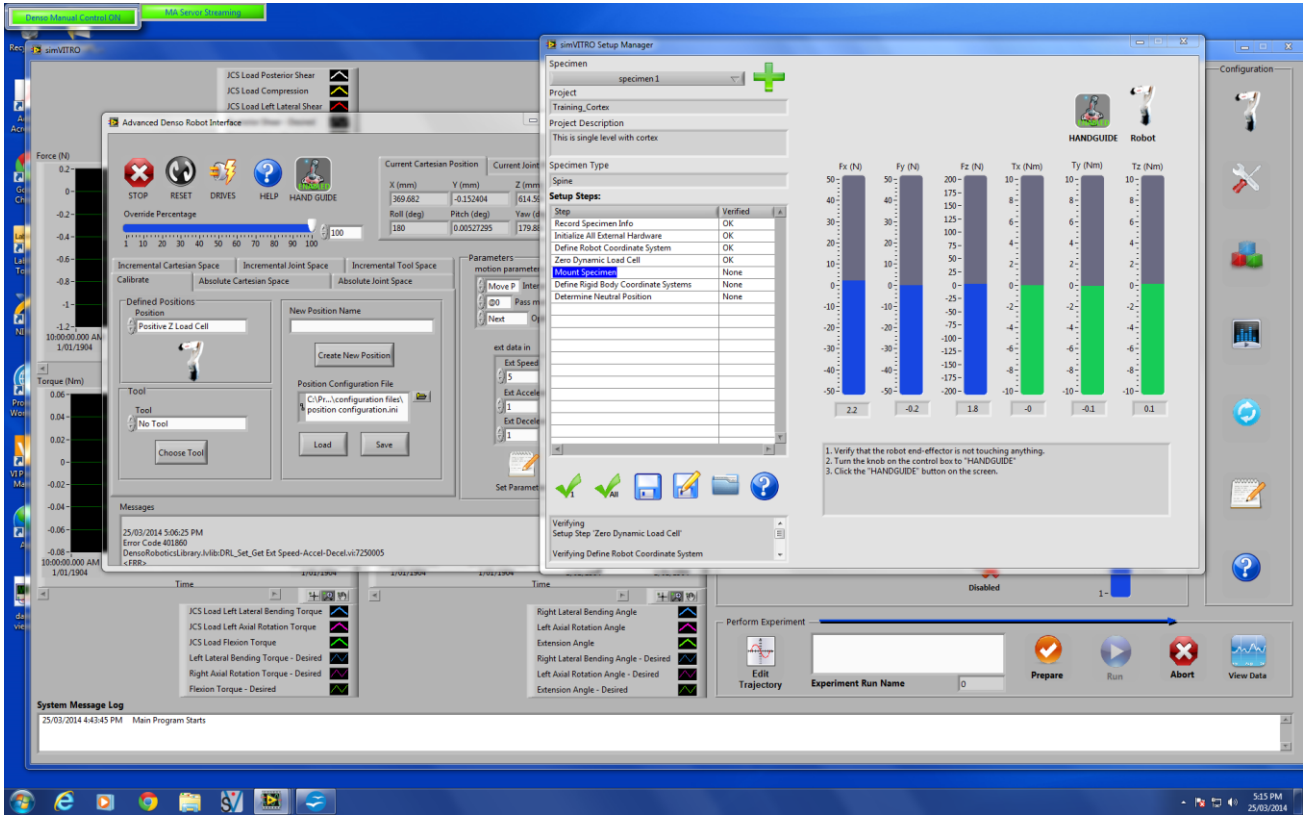
- Setup – Zero Dynamic Load Cell
  - Either load an existing mass/center of mass value and calculate only offsets or create a new mass/center of mass value
  - Most of the time you will just load previously used values



- Setup – Zero Dynamic Load Cell
  - To create a new mass/center of mass value, the half a specimen with fixtures must be attached to the robot when capturing load cell value (this requires destruction of the specimen, so do this on a previously tested specimen)
  - Fill in a descriptive name (i.e. sheep tibia) and these values can be loaded every time a sheep knee is tested.
  - Click the check 1



- Setup – Mount Specimen
  - Drive the robot close to the top of the specimen using the advanced robot interface
  - Push the HandGuide Button and follow instructions for mounting the specimen
  - Be sure deselect HandGuide before moving forward
  - Click the Check 1



- Setup – Define Rigid Body Coordinate System
  - Collect the points for each rigid body and when finished, click the calculator
  - If there are no errors, click the check