Hardware and software requirements

Hardware for a team of 3 students:

- 1 ev3 Educational kit
- 1 Lego charger (not part of the kit, must be bought separately)
- 1 ethernet cable
- 1 apple usb-ethernet adapter
- 1 computer Linux or Windows OS (OSX not currently supported), and an ethernet port.

Software:
- Matlab 2014a with the following packages (do simscape and … need to be installed, or can the models be used without the package? Check:)
  o Simulink ev3 extension
  o Simscape
  o Stateflow
  o System Identification Toolbox
  o Optimization Toolbox

Available documentation and models

- *Objectives*: a list of the topics covered in each lab session. This is useful to synchronize the lab sessions with the classes and to ensure the necessary theoretical tools have been introduced before they are needed in the lab.

- *LegoModel.slx*: this is a nonlinear model of the actuators of the full system, with the same input and output ports as the real system. It can be used by the students to test the control algorithms at home, or whenever the Lego bricks are not available.

- LabSessions.pdf: a detailed guide through the four lab sessions.

All the lab files (the LabX_X.slx Simulink files) are available upon request by email to alessandro.colombo@polimi.it