ABB ROBOT

Checklist for Education

Below are pre-order/pre-delivery and post-delivery checklists to help you plan for your new ABB robot purchase.

Pre-order/Pre-delivery

- ☐ Plan out the educational objectives.
  - What are the age groups using the robot?
  - What are the learning objectives for the institution/class?
    - Community college/vocational training?
    - University/manufacturing/engineering prep?
    - K-12 general STEM?
    - Maintenance technician training?
    - Multiple uses?
- ☐ Obtain the required product specification and product manuals for the controller and manipulator.
- ☐ Get stakeholders input in these areas:
  - Electrical power
  - Pneumatics
  - Computer networking
  - Riggers/movers
    - Can they get the robot from the delivery truck into the final space?
    - Can they move the robot into final position? Lifting capabilities?
- ☐ Layout/integration considerations
  - How will the robot be mounted? On floor, bench, other?
  - Will the floor or bench be suitable to hold the robot?
  - Will the robot platform be mobile? If so, can it fit through doors? Any stairs in the building that may be problematic? Are utilities available at all locations the robot is intended to be used?
  - How many students will need to be accommodated at a time? Will the space have room to accommodate all the students safely?
  - What computer resources will you need to support the robot and instruction? PC? Projection system?
  - What tooling will be required such as EOAT? How will purchased items such as grippers be mounted on the robot and how will they be actuated via RAPID (electric, pneumatic)?
  - What miscellaneous items might be necessary (hand tools, work benches, workpieces, feeder mechanisms, conveyors, HMI, etc.)?
- ☐ Safety
  - What age groups will be using the robot?
  - How will potential tour groups of younger children be safeguarded?
  - Will secondary groups ever use the robot. Example: Will a robot purchased by a community college be used in a K-12 summer robot camp? If so, what safety protocols should be considered?
  - Think about safety through all possible scenarios and stakeholders. Examples: Custodial staff, tour groups, building maintenance workers, teachers, students, etc. This should probably be a form of risk assessment.
- ☐ Training
  - How many instructors will be working with the robot? Who should be trained?
  - Will a maintenance person be involved with routine maintenance?

Post delivery

- ☐ Have trades/maintenance personnel verify the utility requirements for the robot have been met.
- ☐ Use the product manuals for the controller and manipulator to develop a checklist for the required installation, start-up, and commissioning.
- ☐ Have trades/maintenance personnel move and install the robot.
- ☐ Have knowledgeable computer support person help finalize and test computer network installation.
- ☐ Configure the I/O on the robot.
- ☐ Create back-ups of robot.
- ☐ Test safety systems.
- ☐ Create written start-up and shut-down procedures for students and faculty to follow.
- ☐ Create written rules regarding student behavior when working around the robot, including penalties if rules are not followed. Make sure your administration is on-board with these rules.
- ☐ Create a written safety test that students must complete before working with the robot.
- ☐ Jog the robot into the sync position (0 degrees on all joints) and verify the witness marks are lined up.
- ☐ We are here to help, for technical support call 1-800-HELP-365 or email robotics.support@us.abb.com
- ☐ Scan the QR code below to join our academic network
- ☐ Enjoy your new robot!

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