In-Position Technologies
RENi Grant
for
Dobot Magician Robot Lab

BACKGROUND

In-Position Technologies (IPT) is an automation company with extensive experience in robotics, machine vision, motion control and other automation technologies. In addition to industrial automation, IPT is a chief distributor of Dobot educational products in the United States and is looking to improve robotics education programs throughout the country.

OVERVIEW

The country is experiencing an automation revolution and IPT strongly believes that for our students to be successful our schools need to include robots in the classroom. To help facilitate this change, we have created the RENi Grant. Our mission is to provide the materials and training necessary for a high school classroom to start up a new robot program. The grant winner will be used as an example to other high schools on how to start a robot program at their school. Special consideration will be given to underprivileged classrooms but all high schools are welcome to apply. As part of this program, the awarded school will be providing the following at no cost:

- 6 Dobot Magician Educational Robots. Each robot includes
  - 3D Printing Kit
  - Writing Tool that allows the robot to draw images uploaded into the software
  - Pneumatic Grippers and Suction cup to allow the robot to pick objects up
  - Laser Engraving kit that can engrave on wood, leather, cardboard and paper
  - Xbox like controller for remote robot control
  - Wi-Fi module to allow for wireless programming via PC or iOS device
  - Bluetooth module to allow for wireless programming via PC or iOS device
  - https://www.dobot.us/product/dobot-magician-educational-version/
- 1 Linear Rail
  - This is a plug and play add-on for the Dobot Magician and allows it to travel along the 1m length of the rail. This will extend the robot's reach and will add on its capability to simulate industrial robot applications
  - https://www.dobot.us/product/sliding-rail-linear/
- 3 Micro-Production Line Kits. Each kit includes:
  - Conveyor Belt with plug and play capabilities with the Dobot Magician
  - Proximity Sensor that can start/stop the conveyor when objects appear on it
  - Colored Blocks that can be used to simulate objects coming down the conveyor line

  - Color sensor that can be used to detect the color of the provided blocks and allow the Dobot Magician to sort the different colored blocks as they come down the conveyor
  - https://www.dobot.us/product/conveyor-belt/
- DobotStudio Software for robot programming
- 3 Units of Curriculum
  - Unit 1: Introduction to the Dobot Magician
  - Unit 2: Introduction to Computer Programming
  - Unit 3: Introduction to Robots and Manufacturing
  - Curriculum can be downloaded here: http://www.dobot.us/k12/
- Training on how to use all the provided equipment

This Dobot robot lab package is valued at $15,000.

To apply for this grant, please fill out the application in its entirety.

REQUIREMENTS

- Robots must be used in a high school (9^{th}-12^{th} grade) classroom
- Schools must not already have a Dobot Magician
- Awardee must obtain photo and video release forms from all the students in the class
- Photos and videos sent in must only include students that have provided a signed photo and video release form
- Awardee must provide at least one photo or video each week with at least one written paragraph each week of the course providing an update on the classroom's progress within the robot course
- Many of these videos, photos and written updates will be posted on IPT's educational blog found at www.dobot.us
- Awardee must allow for IPT film crew to be present when the classroom unboxes the robots for the first time and again on the last day of the course to interview students and teachers
- Awardee must teach with provided curriculum
- Course must be taught in 2019-2020 school year
- If requirements of this grant are not kept throughout the duration of the classroom the awardee will be expected to return the robots at the end of the course

DUE DATES

- Proposal entries due by April 30^{th} 2019
- Finalists will be notified by May 10^{th} 2019 and proposal to be awarded by May 31^{st} 2019
- Send all submission to christianh@iptech1.com

If you have further questions, contact Christian Hunter by email: christianh@iptech1.com or phone: 385-206-2607

In-Position Technologies
RENi Grant Application

School Name:

Mailing Address:

Designated Teacher Name:

Email:

Phone Number:

Signature:

School Principal Name:

Email:

Phone Number:

Signature:

1. What is the educational background of the teacher designated to teach this course?

2. If applicable, list the computer science, robot, engineering or manufacturing courses the designated teacher has taught and years of experience of each listed course

3. What grade level will be participating in this program?

4. Will this course be an addition to a current class or program? How many class periods per week do you expect to teach this course?

5. What percentage of students at your school are provided free and reduced lunch?

6. Does your school offer any robot related courses or have robot related clubs? If so, please explain.

7. Do you think the provided hardware is enough to accomplish what you and IP Tech envisions for this course? This may include changes to the hardware or curriculum provided. If not, please explain.

8. In 1,000 words or less please explain why we should choose your classroom for this grant