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Plaintalk

Plainedge Public Schools Community Newsletter

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Engineering Teacher Constructs Mechatronics Device



Introduction to Engineering teacher Robert Gandolfo demonstrates a mechatronics device operated by computer commands, that he and another teacher built as part of a summer research program.

Plainedge teacher Robert Gandolfo demonstrated a mechanism that combines concepts of mechanical, electrical and computer science engineering to his students in the Introduction to Engineering class. The device was designed, built and programmed by Mr. Gandolfo and Mr. Paul Friedman of Seward Park HS as part of a summer research program at Polytechnic University.

The device is a visual demonstration that simulates the motion of a crane or a human elbow and has applications to the engineering problem solving activities that the Introduction to Engineering students will be doing over the school year.

The mechanism, a cantilever beam supported by a cable (string) at one end, is operated by a

programmable micro-processing chip. Servomotors driven by the chip set the angle of the beam to the desired value. All of the measured and calculated data is displayed on the computer screen allowing the student to make changes and instantly see the effect.

During the summer Mr. Gandolfo and nine other teachers from Long Island, New York City and New Jersey spent four weeks participating in a National Science Foundation funded research program at Polytechnic University in Brooklyn under the direction of Professor Vikram Kapila. The goals of the program are to train teachers in the area of engineering called mechatronics enhancing high school instruction and thereby attracting more students to the engineering profession.

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www.plainedgeschools.org

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