

GET WISE THIS SUMMER!

This program will provide 20 middle and high school teachers with an opportunity to engage in hands-on engineering design in an intensive two-week residential workshop.

Participants will learn to enable their students to satisfy Standard 5 in the NYS Learning Standards in Mathematics, Science and Technology: "to apply technical knowledge and skills to design, construct, use, and evaluate products and systems." Teachers will also learn to develop sensor-based science & math curricula and prepare their students to enter science and engineering careers.

By the end of the program, participants will have completed 70 hours of in-class professional development and an additional 15 hours of supplemental activities in the evenings and the mid-point weekend.



For over 150 years, Polytechnic has had a tradition of creating knowledge and educating engineers and scientists. We have a vested interest in the quality of k-12 school programs from which we draw our students. Consequently, for the past decade Polytechnic has actively provided assistance to scores of middle and high schools, with a focus on *discovery learning*.

POLYTECHNIC UNIVERSITY
PACKARD CENTER
SIX METROTECH CENTER
BROOKLYN, NY 11201
ADDRESS CORRECTION REQUIRED

WISE

**Workshop in Instrumentation,
Sensors and Engineering at
Polytechnic University**

August 13-24, 2007



Eligible teachers must be employed in one of the following school districts

- Bellmore-Merrick CHSD
- East Meadow SD
- New Rochelle SD
- Sewanhaka SD
- White Plains SD

WISE RESIDENTIAL WORKSHOP

Today's students are attracted to gadgets, such as iPods, video games, and cell phones. This trend can be leveraged through the informed use of sensors to motivate students to excel in science and math.

Participants will be introduced to foundational elements of engineering through the use of sensors and computerized data acquisition.

The **WISE** program will make extensive use of team-based, real-world engineering design projects based on the components of our acclaimed National Science Foundation-funded Project RAISE (Revitalizing Achievement using Instrumentation in Science Education).



Students engaged in a sensor-based lab. Use of sensors in five high schools resulted in (1) an increased percentage of students sitting for the Regents exam, (2) a higher passing percentage, and (3) higher grades for those who passed.

Daily Schedule

8:00-9:00	Breakfast (provided) & informal discussion
9:00-10:30	Introduction to engineering lectures
10:45-12:45	Hands-on sensor labs
12:45-1:30	Lunch (provided)
1:30-3:30	Hands-on group design projects
3:45-5:15	Discussions of technology & pedagogy
5:15-7:30	Dinner on your own
7:30-9:00	Presentations on contemporary engineering

Objective

To introduce teachers to engineering and the use of sensors in science and math education.

Eligibility

Applicants need not have expertise in engineering but should be teaching in a science or math area and be willing to implement modern sensing in their classes.

Why a Residential Program?

WISE is an intensive program, with supporting activities in the evenings and weekend. Participants are encouraged to take advantage of the **free** residential program on Polytechnic's campus.

Stipend

Each teacher who successfully completes the full program will receive a stipend of **\$4,000**.

Instrumentation Kits

Each participant will receive a comprehensive sensors and instrumentation kit to use during the program and to take back for use in his/her school.

Funding

Funding is provided by New York State Education Department **Engineers of The Future** Program

Application Deadline

June 1, 2007

Application Form

Sign up for one or more components

WISE Institute Program (9AM-5PM) **Required**

Evening & Weekend Program (7-9 PM)

Residential Program

Priority will be given to teachers selecting all program components

Name _____

Position _____

School _____

Home Address _____

Home Phone _____

Email _____

Application Check List

Application Form

Resume

List of courses taught in the last 5 years

300 word essay indicating how you will integrate sensors in your classes

Endorsement

Name of Endorsing Person _____

Position (Principal or Science /Math Chair... etc) _____

Signature _____

FOR MORE INFORMATION, OR TO SUBMIT APPLICATION

Packard Center for Technology & Educational Alliances

Polytechnic University

Six Metrotech Center

Brooklyn, NY 11201

Phone: (718) 260-3524

Fax: (718) 260-260-3733

Email: sherman@poly.edu