Teachers brush up on science skills at JSU

ABOVE: Paige Gray, a science teacher at Cedartown Middle School in Cedartown, Ga., holds up a fluorescent bulb to a Tesla coil. The coil is a type of resonant transformer circuit invented by Serbian-American scientist Nikola Tesla around 1891. BELOW: Dr. Nouredine Zetilli holds a light bulb up to a Tesla coil.

ELECTRIFYING

BY GHENI PLATENBURG
Star Staff Writer

Mesmerized like children in a toy store, several teachers sat entranced in a Jacksonville State University classroom Tuesday watching physics professor Nouredine Zetilli move electricity with a light bulb, an outlet, and a coin.

This demonstration was just one of many presented at this week's TEAMS EPP workshop.
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This demonstration was just one of many presented at this year’s IMPACTSEED program, otherwise known as Improving Physics and Chemistry Teaching in Secondary Education.

“I really like all the experiments. As a teacher we don’t always see everything in terms of a physicist or chemist so when we get these demonstrations and learn how to put things together on our own it makes things a lot better for us,” said Amanda Glaze, a chemistry teacher at Rome High School in Rome, Ga.

The program, which is federally funded, is in its seventh year. The money is administered through the Alabama Commission for Higher Education.

“Having been a teacher myself, I know that teachers are very very hungry for ideas, and the teachers really like it. The Commission is very proud to have its little part in administering funds for this program,” said Nancy Lacey, a staff associate for the Alabama Commission on Higher Education Office of Institutional Effectiveness and Planning.

Approximately 20 to 30 teachers are selected from schools around the Southeast to participate in the program’s 12-day summer institute where they are able to conduct hands-on training and brush up on science skills.

According to the program’s Web site, the program was developed to address two pressing problems: Around 83 percent of chemistry teachers and 94 percent of physics teachers are teaching out of their field — meaning teachers have not specialized in the subjects they are teaching — and student achievement in physical sciences in North Alabama is much lower than the state average.

“When I started teaching freshman physics during fall 2000, I noticed that the majority of my students were terribly weak in physics because they had never

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taken a physics class before and the few who did, I wish they never did because the job was so poorly done on them in high school that I ended up spending a lot of time trying to deprogram them,” said Zettilli, JSU physics professor and founder of IMPACTSEED.

“(Students) were telling me invariably that they had not taken physics because it’s a hard subject, it’s intimidating, it’s for the smart, and some curiously enough said they didn’t take it because it was being taught by the football coach,” he added.

After completing the summer institute, teachers receive $3,050 in teaching materials to conduct experiments in their own classrooms.

Due to the lack of funding they receive from their own school districts, many teachers are happy to receive the money from the program.

“I used to work at a school that didn’t have graduated cylinders. It was like here’s four beakers and some mason jars. Now go and change the world,” said Ranburne High School physics teacher Jason Cole.

Cole, who said he received a science supply budget of $0 for the 2009-2010 school year, said, “People can say what they want in this state, but there is no priority to put money into the sciences.”

Some teachers would like to see some changes in next year’s program.

“I wish they had one week for chemistry teachers and another for physics teachers. Ten days is a lot. If they do it that way teachers can go to one session or both if they want,” said Leslie Wright, a chemistry teacher at Munford High School.

Wright said the program allows her to be a role model to her students.

“I think they see if I can do it, then they can do it. The girls look at it like if Ms. Wright can do it so can I, especially if it looks like I know what I’m doing.”

Because the program is grant funded, program administrators hope the program will continue next year.

“We would like to request from legislators to generously continue funding these kinds of projects through A.C.H.E. If funding goes away we’ll no longer be able to offer the program, and that will be a terrible loss,” said Zettilli.

For more information on this program, log onto www@jsu.edu.