



MARK CROSSE / THE FRESNO BEE

Fowler High School teacher Gerald Bodily instructs at the "blackboard" during an advanced chemistry class.

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Science teacher spreads chemistry

College grads trained to teach chemistry, physics.

By Eddie Jimenez / The Fresno Bee

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Fowler High School chemistry and physics teacher Gerald Bodily might retire -- if only there were someone to take his place.

Worried about a severe shortage of science teachers, the 67-year-old Bodily is starting a program to prepare college graduates to become chemistry and physics teachers.

Bodily is launching ChemTeach, a 10-month program designed for anyone with a four-year degree in any major who wants to become a chemistry or physics teacher.

Each year, Fresno Unified School District alone hires more science teachers than graduate from California State University, Fresno, said Stephen Bock, science coordinator for the county Office of Education.

"These teachers are in high demand," he said. "Their names go to the top of the list in hiring, and there are districts in the state that are offering up to \$10,000 signing bonuses."

The lack of chemistry and physics teachers is becoming a crisis, Bock said.

"There are districts in Southern California that are recruiting in Asia and India to teach these classes, because they can't find California teachers to fill these positions," he said.

In 2005-06, 20% of California high school physical science teachers -- which includes chemistry and physics instructors -- were not originally trained in those subjects, according to the Center for the Future of Teaching and Learning, a nonprofit group that does research on public teaching work-force issues.

That compares with 12% in mathematics and 15% in English and language arts, the research organization found.

The consequences of students lacking strong science and math skills could be disastrous for the state's economy, said Harvey Hunt, vice president for policy research at the Center for the Future of Teaching and Learning, based in Santa Cruz.

"Our whole economy in the 21st century is predicated on folks who are prepared in these areas," he said.

Larry Powell, Fresno County schools superintendent, said the state will be at an economic disadvantage unless schools produce more students proficient and interested in science and math.

"You lose out on almost all high-tech industry, because almost all of it is related to math and science," he said.

MORE INFORMATION

For information about ChemTeach, contact teacher Gerald Bodily at (559) 896-2355 or at

www.fowler.k12.ca.us/directory/schools/fowler/chemteach.html

Also, many of the Valley's agriculture-related jobs require science and math skills, Powell said.

The numbers of graduating science and math teachers are not promising, said Jim Greco, administrator for the Mathematics and Science Leadership Office with the state Department of Education.

"We're going to need more than 33,000 new math and science teachers over the next decade," he said. "If you look at the current trends ... we're going to be about 30% short."

Bodily's ChemTeach program is a small step toward addressing the need, education officials said.

The program, which begins in June, will be offered through Fresno State's College of Science and Mathematics. Those enrolled in the program will need to have access to the Internet, have to do home study 90 minutes daily and attend three-hour lab sessions taught by Bodily at Fowler High every other weekend.

The program will prepare the students to pass state tests in chemistry and physics, which are a requirement for classroom teachers in these two subjects.

No students are enrolled yet, but Bodily said he won't put a cap on the class size.

Bodily's goal is to tap into what he believes is a vast pool of prospective teachers -- someone looking for a new career, a sixth-grade teacher seeking a change, stay-at-home mothers ready to work outside their homes and farmers.

"I just know there are a lot of people who would love this," he said.

The cost of books and materials and Bodily's stipend will be covered by the Mathematics and Science Teacher Initiative, a state-funded program designed to address the shortage of math and science teachers, said Carol Fry Bohlin, a Fresno State professor of mathematics education and director of the campus's initiative.

Students who want course credit can take the three-unit classes -- the program is divided into three courses -- for \$60 a unit, Bodily said. Others can take the classes for free, he said.

Bodily, who is working toward a doctorate in education at Fresno State and UC Davis, said his goal is to develop competent science teachers. He believes he can accomplish that, but students will have to be willing to work hard during the 10-month program.

"I need smart people who want a fun job," he said. "These kids I work with are fantastic."

Another motive is increasing the number of Hispanic science teachers, which he says is important, given the Valley's demographics.

Bodily has been teaching high school science for 36 years, the past 21 at Fowler High.

His passion for teaching isn't so much about science, but rather working with students.

"High school students, they're fragile and they need support," he said.

"If it's possible to make a difference, that's where you can do it in helping them succeed."

Bodily moved to the Valley from the Los Angeles area, initially teaching at Lindsay High School.

"I wanted to be in a rural setting," said Bodily, who grew up on the East Coast.

Living in a rural area also has enabled him to have a side business as a beekeeper. His wild bees pollinate almonds.

He said his five children followed him into "helping kinds of professions" -- nursing, special education and working with remedial students.

As to what he has planned after completing his doctorate, he's not sure.

"I just always need a challenge," he said. "I just get bored."

Bock said he is not aware of any other program like Bodily's ChemTeach concept, but expects there will be similar efforts to get more science teachers "in the pipeline."

Fowler High Principal Russell Freitas, who praises Bodily's dedication to his profession, said the pool of chemistry and physics teachers "has dwindled to nothing" in the past five years.

"Jerry knows that, so that's why he's doing something about it," he said.

The reporter can be reached at ejimenez@fresnobee.com or (559)441-6386.



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Fowler High teacher Gerald Bodily claps for students who presented a problem and calculated it in front of their advanced chemistry class.

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