College of Agriculture and Life Sciences

They Really Are Good For You!

"Train-the-Trainer" Course Promotes Health Benefits of Fruits and Vegetables

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COLLEGE STATION - A lot of research goes into discovering the health benefits of fruits and vegetables. Unfortunately, understanding much of this information is confusing to nonscientists, and science alone cannot convince people to add produce to their diet.

These two components—science and communication—were the basis for a new course offered at Texas A&M University.

Jessica Cooperstone, a food science graduate student at The Ohio State University, took the course, "Science of Foods for Health," because she wanted to learn how to communicate expert knowledge to those without her technical background.

"I call it the 'Mom Factor,'" Cooperstone said. "I want to be able to explain what I do to my mom in a way she will understand."

A collaborative effort of several institutions, the course was the first of its kind in the nation. It covered why fruits and vegetables contribute to a healthy diet, how to conduct the research involved, and how to educate consumers.

The semester-long course was offered through Texas A&M's Department of Horticultural Sciences and the Vegetable and Fruit Improvement Center (VFIC) and was available to both graduate and undergraduate students.

Using a multi-disciplinary approach, the course included a hands-on training portion that was funded through a U.S. Department of Agriculture Challenge Grant.

The traveling "train-the-trainer" exchange program brought together 11 students from Texas A&M, two students from Ohio State, and four students from Iowa State University.

The training began at Texas A&M in December 2009. Spending three days at each location, students traveled to Iowa State after their course work in Texas and completed their training at Ohio State.

The course work was designed to give participants skills in research methods and teaching strategies, and to equip them to educate consumers on the science behind the health benefits of produce.

Many students from the three universities reported that the course made a significant impact on them and will continue to help them through their graduate studies.

Chris Ludwig, a junior biology major at Iowa State who hopes to attend medical school, said the class taught him the importance of converting science into layman's terms.

Mike Zeiger, also a junior biology major at Iowa State who hopes to attend medical school, said he learned a lot about the scientific process and the relationship of science and the media.

The course also emphasized the varied backgrounds in fruit and vegetable research.

Kathy Tsamis, a senior biology major at Iowa State interested in nutrition and health, also took the course because of her desire to inform others. Tsamis, who has already assisted with colon cancer research at Duke University, was surprised at how "in depth, yet far reaching" the course was.

Twenty-four researchers from across the nation contributed to the classroom portion of the course, teaching students with interests varying from horticulture to nutrition to chemistry.

Tulle Alexander, a horticultural sciences graduate student and recent graduate at Texas A&M, was impressed with the quality of the lectures.
"Each lecture was presented by an expert, THE expert in their field," Alexander said. "All the information was primary.

"They were the 'best of the best,' the ultimate authority on the subject."

Jennifer Perry, a doctoral student in food science at Ohio State, took the course because it looked "interesting." She also thought it would be helpful for her future career in microbiology.

Perry was surprised to see the diversity of academic interests of the students enrolled in the course.

"In graduate school your focus is very narrow, and you spend all your time with people who are doing the same thing as you," Perry said. "It is great to see the diversity of academic disciplines represented in the class."

Dr. Bhimu Patil, director of VFIC and professor in the Department of Horticultural Sciences, said that the students enrolled in the course seemed to enjoy the hands-on training and the opportunity to further their understanding of the research activities and science behind fruits and vegetables, from field to consumer.

Many of the undergraduate students who participated in the training portion mentioned that the course would be helpful in graduate school. Patil said he was pleased with the interest some students showed in continuing their research in the field of fruits and vegetables, and their role in health benefits.

Several students have reported eating more fruits and vegetables than before.

“I am glad that the course is helping not only educate students about the science behind the health benefits, but also making them use them in their daily life to maintain good health,” Patil said. “I hope these students will share their experiences as well as science of health promoting properties to their family and friends.”

Christopher McGriff, a student at Texas A&M, said he didn’t realize until after the class had ended how much his diet had changed.

“I definitely leave the store with more fruits and vegetables than I did before,” he said.

More about the course:

Science of Foods for Health was hosted jointly by the College of Agriculture and Life Sciences’ Department of Horticultural Sciences at Texas A&M, the Department of Food Science and Human Nutrition at Iowa State, and the Department of Food Science and Technology at Ohio State.

Led by Patil, the course was developed in collaboration with Dr. Diane Birt, from Iowa State; Dr. Steven Schwartz, from Ohio State; and Dr. Neil Knobloch, from Purdue University, as well as additional collaborators.

Experts providing course instruction represented Texas A&M, Harvard School of Public Health, Iowa State, Ohio State, Cornell University, Purdue University, the University of Arkansas and the University of Manitoba in Winnipeg, Canada.

Science of Foods for Health was based on another intercollegiate multi-disciplinary course developed by Patil called “Phytochemicals in Fruits and Vegetables to Improve Human Health.” That course, also funded by a U.S. Department of Agriculture Challenge Grant, is open to graduate students at Texas A&M and other participating universities.

Photos:

Top- (Left to Right) Dr. Manju Reddy (Iowa State); Dr. Tong Wang (Iowa State); Tulle Alexander (Texas A&M); Desiree Koehn (Texas A&M); Mike Zeiger (Iowa State); Justin Kaiser (Iowa State) and Christopher McGriff (Texas A&M)

Middle- (Left to Right) Mike Zeiger (Iowa State); Justin Kaiser (Iowa State); Sean Thompson (Texas A&M); and Christopher McGriff (Texas A&M)

Bottom- (Left to Right) Sean Thompson (Texas A&M); Katherine Tsamis (Iowa State); and Kranthi Chebrolu (Texas A&M)

About the college:
With an enrollment of almost 6,500 students in 14 academic departments, the College of Agriculture and Life Sciences at Texas A&M University offers more than 80 undergraduate and graduate degrees and has a faculty of over 400 members, including a Nobel laureate and a Pulitzer Prize winner. Research programs include food sustainability

and safety, human and animal health, genetics, renewable natural resources and bioenergy. Mark Hussey is Vice Chancellor and Dean.

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