Showtime at AGRIscapes

The class, part of the Don B. Huntley College of Agriculture's nutrition and food science department, challenges student teams to design and develop an innovative food product intended for supermarket shelves. It's a task that draws upon students' previous coursework in biology, chemistry, food safety, nutrition and food process engineering.

A few days before the end of the fall semester, the class showcases its ideas in a large room at Cal Poly Pomona’s AGRIscapes. Open to the public, the event represents the culmination of student work over the past 15 weeks.

At the showcase, students hand out a variety of samples, such as vegan jerky, grilled-cheese-and-tomato flatbread, and a cookie snack with peanut butter and banana filling.

Of that last item, called a Breakie, senior Rosanna Eldumiate says it took a lot of tinkering until her team was satisfied. “We had at least 20 different versions of our Breakie until we got the right one,” she says.

Her group’s trial-and-error experience is the norm. Throughout the semester, the eight teams of four or five students put in about six hours a week in the lab to experiment with their product, revise formulations, draw on feedback from taste tests, assess input from their classmates, and experiment and revise some more — all while adhering to strict food safety and nutrition guidelines.

“It's the ultimate example of learning by doing, from beginning to end,” says Lisa Kessler, interim dean of the Huntley College of Agriculture.

It Begins with Breakfast

The milk-and-cereal ball team was inspired by a popular snack in Vietnam — deep-fried rice balls coated in bread crumbs. Team member Thanh Nguyen, who emigrated from Vietnam when he was 18, says the team put an American spin on the snack in creating a nutritious breakfast product for consumers on the go.

“The bite-sized ball has a crunchy cereal exterior and a warm, creamy center. “It’s a good source of protein for people who want to go out and exercise after breakfast,” Nguyen notes.

Where things got sticky for the group was nailing down the specifics for the liquid center. It took a great deal of experimentation before they found the right temperature and cooking time.

Jacqueline Trinh, the team’s culinary expert, tried adding starch to the filling, but it made the texture too jellylike. To thicken the filling, she hit upon an idea: xanthan gum, a substance she learned about and analyzed in other food science classes. Xanthan gum thickened the milky center and gave it the right texture.

Another important aspect was the data analysis by team member Jeffery Lo. After the sensory evaluation tests (outside participants taste-tested the various products), Lo broke down their responses about taste, look and texture so his group could improve its offering.

The result is a breakfast item that goes from freezer to toaster oven. A quick and easy meal — no utensils or bowls needed.

Food for Thought

THROUGH TEAMWORK AND LEARN-BY-DOING, STUDENTS CREATE PRODUCTS DESIGNED FOR SUPERMARKET SHELVES

By Paul Sterman

The students were stumped. The group of five seniors had a goal at the beginning of the food product development class: to make an instant breakfast item that’s tasty and nutritious. Their vision for a bite-size milk-and-cereal ball was clear, but making it a reality was proving harder than they thought.

They were stymied as they tried to develop the precise formula for the ball’s milky center — the “lava” filling. The texture and taste weren’t right, and students couldn’t figure out the exact temperature at which to heat the liquid.

“We had a lot of difficulties,” recalls team member Zin Mon. Unlocking the keys to this food puzzle would take perseverance and problem-solving skills — qualities that every food scientist worth their salt needs to be successful.
Music Department Debuts ‘Rolls Royce’ Studio Recording Equipment

A new state-of-the-art audio recording console puts Cal Poly Pomona on the same level as many renowned music studios worldwide. CPP's studio now houses an AMS Neve Genesys G32 audio recording console and some associated equipment, secured with funds from the Student Success Fee's 2018-19 SPICE grant and the California Lottery.

"A console in the heart of a recording studio," said Music Professor Arthur Winer. "After the microphone, the console is the vehicle by which audio signal interfaces with both the acoustic and recorded realms. "Neve is the 'Rolls-Royce' of the audio world. Cal Poly Pomona students who record with this console can be confident that they are learning on the very best." The music department’s recording studios are in near-constant use by faculty and students from early in the morning until late in the evening.

"I cracked the proverbial bottle of champagne over the console in December by recording a variety of demanding tests," Winer said. "It's ready for the students for spring semester and beyond!"

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