Picasso and Physics?

University of South Florida students discover the art of engineering. BY LYNNE SHALLCROSS

WHEN THE CLASS began, most of the engineering students couldn't tell the difference between Pablo Picasso and Camille Pissarro. But by semester's end, they could easily nail almost 100 works from 50 well-known artists. But why does it matter anyway? They're studying engineering, after all.

Well, for starters, learning art broadens the perspective of engineering students, who are often bogged down with a packed curriculum of math- and science-based courses. Schools across the country recognize the need for technology-inclined students to develop their artistic side in order to become well-rounded adults, says A. Dave Snider, professor emeritus of electrical engineering at the University of South Florida (USF). And art and engineering have a lot more in common than you might think, Snider and his students say.

After being challenged by other faculty members in a meeting on how to meet university, ABET and other curriculum requirements, Snider created a course merging art and engineering. The unlikely course has not only been hugely popular with USF students, but it's also attracted the attention of the National Science Foundation, which gave Snider $100,000 in funding for the class.

Half of each class is devoted to viewing and analyzing the works of one or two artists; the other half covers some aspect of optics as it interacts with art, like the theory of color, how the eye works or a mathematical description of light. "It's an optics review class, but the laboratory is the art museum," Snider says.

Each semester, the class of about 65 students is made up mostly of engineering students with a dozen or so art students. Snider originally wanted the class to be open exclusively to engineering students so that they could learn about art without feeling self-conscious. But when NSF gave Snider the funding, it asked that the class be open to all students so that non-engineering students might be exposed to engineering. Snider says the interaction and differing viewpoints of art and engineering students lead to some "really intense arguments." It's like both groups of students see the art through different eyes, he says.

Yvonne Smith, a junior in industrial engineering, calls Snider's class "the best of my both worlds." Before deciding to major in engineering, Smith considered an art degree. Industrial engineering, she says, is a great way to bring together art and engineering. "I want to be able to design as well as figure things out."

"Art is an integral part of innovation," says John Pickering, a sophomore who's deciding between computer science and computer engineering. "For those who have a lot of experience in art and thinking outside the box—those are the people who will try to develop new things and new ideas rather than use what we already have."

While Snider doesn't think the class will open any doors for the students professionally, he says they will walk away with an appreciation for art. Down the road, Snider says, when business takes these students to Madrid or Rome or Paris, they can walk into an art museum and see a work they know something about.

Judging by student reactions and how much they pick up by the end of the semester, it looks like Snider's crazy idea to pair engineering and art wasn't all that crazy after all. "Most people tend to put math and science on one side and art and music on another," Smith says. "But (Snider) shows that everything goes together, everything's not separate—math and art work together."

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USF students take measurements for a stress analysis project at the beginning of the course.

Lynne Shallcross is associate editor of Prism.