

Engineering COMMUNICATION

The minds behind iFixit return to their alma mater to improve the future of technical communication

BY LARRY PEÑA

If you've ever had to struggle through a heavy, confusing repair manual, you're probably aware of an old stereotype: Engineers are not a group well known for their communication skills.

It's a tradition that Cal Poly alumnus Kyle Wiens (B.S., Computer Science, 2005) is trying to end.

"We don't engineer manuals—maybe that's the problem," says Wiens. "We treat communication as just the byproduct, when really we should be putting as much attention and engineering into the communication as we do into the product itself."

Wiens is the co-founder of iFixit, a company dedicated to creating free, open-source, well-written manuals for just about every electronic device imaginable. Recently, he and his company have helped develop an innovative approach to technical writing for Cal Poly students: English 149.

In the class, a collaboration between the English Department and the College of Engineering, students work together in groups to disassemble an electronic



Heather Martin, a fourth-year mechanical engineering student, took the English 149 tech writing class. Photo courtesy iFixit

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device and create a clear, easy-to-use manual on how to put it back together. Projects are graded on how well others are able to follow the directions.

“The idea is to make teaching communication actually something that is interesting and practical and hands-on for engineers,” says Wiens. “Being able to connect the skills that you need to communicate with something practical and hands-on that we all want to do has gotten the students really excited.”

“I had never written to the extent that my final work was going to be displayed for other people to use,” says Thomas Soria, a recent engineering grad who now works with Wiens at iFixit. “Most of my writing was for papers, for educational purposes. But this was actually a guide somebody was going to have to follow.”

The instruction covers every aspect of creating a modern, user-friendly repair manual. Students learn how to write for clarity and brevity, how to take high-quality photos, and even how to produce and host video tutorials. The finished projects are shared on iFixit’s website, which can be a big résumé point for the students who created them.

“On a regular basis, big companies come to campus and want to hire people specifically out of the technical writing program,” says Wiens. “Tesla Motors came to us and said that they wanted to hire eight people out of the class, specifically to write instructions at their factory. As a result those folks now working at Tesla reduced the amount of time it takes to make a car by 30 percent—which is big, big money.”

“Those are engineers, but they’re not doing engineering,” he adds. “They’re doing communication.”



A quick glance around iFixit’s large, open office floor reveals that Tesla isn’t the only company eager to hire graduates of the program. Almost every desk in the building has a few artifacts of Cal Poly green.

“Yeah, pretty much everybody that works here came out of the class,” Wiens says. “We tend to hire the best and brightest out of those classes to help us write our manuals.”

Other universities have begun to take notice of the innovative and effective approach to teaching tech writing. Since starting at Cal Poly in 2009, iFixit has expanded the program to 10 other schools, including Ohio State, Clemson, the University of Maine, and Cal State Los Angeles. The University of Southern California has expressed a deep interest. But the original program is still the biggest and most successful. “Cal Poly is the leading vanguard on this,” Wiens says.

To be fair, iFixit does get a benefit out of working with Cal Poly students. “We get repair manuals online and they’re open-source and free. That’s what I care about,” he says. “Clearly we’re also able to hire some cool folks to make this project more sustainable.”

“But our real emphasis is how can we build the resources society needs that nobody has been building up until now,” he adds. “We want to make the world better by teaching people to fix things.”

Kyle Wiens
PHOTO BY LARRY PEÑA