

TEACHING TECHNOLOGY

Science Students Learn to Use Social Media to Communicate Research

By Arielle Martinez

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Scientists these days don't just need to be good at putting their ideas into writing; they need to know how to post them on Twitter and Facebook.

That's the premise of an unusual course at the California Institute of Technology, "Social Media for Scientists," which was first offered this past spring by Mark E. Davis, a professor of chemical engineering, and Sarah Mojarad, a communications program manager for social media.

In the course, they taught both undergraduate and graduate students in science and engineering how to use digital platforms to communicate research to both scientists and nonscientists.

"We do think this is the first approach where you're trying to take science and engineering students, people who are going through these very rigorous curricula, and creating a course specifically geared toward their needs," Mr. Davis says.

He and Ms. Mojarad taught the course through case studies in which students examined topics like online reputations, effective presentations, the law, and crisis management.

Guest speakers talked to the students about their own experiences with social media and science. One speaker, Megan Frisk, a senior editor at *Science Translational Medicine*, says she cautioned the students against spreading misinformation.

“I told them not to cherry-pick the information they post because the people who read that are going to make inferences,” she says. “You want to make sure that the information you’re putting out there is accurate and clear with the right context.”

Shannon Stone, a graduate student in chemistry who took the course, says she previously never thought much about avoiding verbosity in her writing.

“Now I think about it all the time whenever I’m using a phrase like ‘We elucidated the structure,’” she says. “Do I really need to use the word ‘elucidated,’ or can I just say ‘solved’? I feel like sometime we use complicated words just to sound smart.”

The course ended with a final paper in which students were asked to analyze Caltech’s use of social media and identify universities with strong social-media presences.

“I didn’t actually give them a page limit, and some of the students went so far as to create final projects that were over 20 pages long,” Ms. Mojarad says. “It was really incredible to get these responses back.”

Finding an Audience

John Timmer, a workshop instructor who teaches a digital-media course at the [Alan Alda Center for Communicating Science](#) at Stony Brook University, part of the State University of New York system, says he doesn’t know of many programs for scientists that teach those topics in great detail.

“How many go into the legal issues like libeling somebody on Twitter? I think that’s probably pretty rare in something dedicated to scientists,” says Mr. Timmer, who is also the science editor of *Ars Technica*, an online technology publication.

Mr. Timmer says that one of the biggest challenges in communicating science to the public through social media is reaching a desired audience.

“Anyone can set up a Twitter account, anyone can set up a Facebook page, but getting people to find it and getting people to pay attention to it is probably the biggest part of the battle,” Mr. Timmer says.

For Steven Lee, a graduate student in chemical engineering who took the Caltech course, one of the most important results was a “mental shift” in his perception of social media.

Mr. Lee says he used to minimize his online presence because of “horror stories about oversharing.” Now he uses social media as a tool to promote his research and accomplishments. “I try to make it easy for people to search and find me,” he says, “and to show them this is who I am.”

Ms. Mojarad says that she and Mr. Davis came up with the idea for the course after they first met, in July 2015, and Mr. Davis became interested in Ms. Mojarad’s background in communications. Mr. Davis says that through his experience teaching an undergraduate writing course at Caltech, he became aware of a need for instruction in the use of modern forms of communication.

“It just seemed like a lot of universities have writing courses as far as trying to teach scientists and engineers communications skills,” he says, “but as far as skills using these digital technologies, they didn’t get much exposure to that.”

Ms. Mojarad says she hopes the students continue to use social media to promote their research. The professors plan to offer the course again in the fall — and at registration, demand was high. Enrollment for the course filled in less than four minutes.

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