University course partners with DOD to tackle national security problems

The Hacking 4 Defense program originated at Stanford University and is coming to the University of Colorado in Boulder.

A new University of Colorado class creating a "palpable buzz" is enlisting the efforts of bright, young minds to solve national security problems from the Department of Defense and Intelligence Community.
The course, Hacking for Defense, is open to all students, but tends to be geared toward graduate students because of a hefty time commitment and need for serious, entrepreneurial passion extending far past the scheduled classroom time.

Dan Massey, a CU professor in the computer science department, is teaching the semester-long course full of 26 students from a variety of majors and interests.

"This is a different kind of class," Massey said. "These are real problems being faced by a real federal agency, and they aren't just throwing it over the wall. They're imminently engaged in the project."

Hacking for Defense, which originated at Stanford University, is another project from the National Security Technology Accelerator, otherwise known as MD5. The project pairs up national research universities across the country with Department of Defense-based endeavors.

This particular project is a win-win, said Lloyd Thrall, director of MD5's Rocky Mountain region.

"We've got students who come in and bring these great, new, innovative ideas and different ways of looking for things instead of seeing things the way we've been doing them for 100 years," Thrall said.

And the students get a chance to work in a startup-like environment and engage with leaders in the Army, special operations, the Marines and more.

"To be honest, this is one of the coolest classes I've had the opportunity to take at CU Boulder," said electrical and computer engineering junior Douglas Anderson. "We're expected to come in with a set of technical skills and actually put that to practical business use."

In week three of the spring course, Massey said five student teams are working on problems ranging from how to better detect small drones to how to enable a navigation system that works underground.

Anderson, 34, is an Air Force veteran and non-traditional student who wanted to be in the Hacking for Defense class so badly, he dropped other classes to accommodate for the time commitment.

"I love project-based classes, but you can almost never pick your group," he said. "The group makes the biggest difference. All you can do is try to get the highest caliber people, and when you know the whole pool is high caliber, that's why I tried so hard to get into this class and am willing to deal with the time commitment."
The students have weekly contact with the federal agencies they’re working with, and Massey said some of the leaders have even turned up in class.

"For some of them, this meant flying out from the East Coast," he said.

The teams are expected to interview 10 potential clients or people who could help improve their projects each week, for a goal of talking to 100 people by the end of the semester.

"That really pushes an engineer outside his comfort zone," Anderson said. "But I think it makes you a double threat — you've got these classes working your technical skills, but here's a class that says, we want to teach you how to talk to customers."

Students interested in taking the course next spring should be prepared for a rigorous selection process, Massey said. The applications for next year aren't open yet, but he said to keep an eye out for more information as it gets closer.

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