VMI cadets look at the threat of cyber security drone breaches

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(WSLS 10) – Drones have been controversial because of the way they might interfere with other aircraft. But, Virginia Military Institute cadets are looking at another threat — the possibility that hackers might be able to take one over in mid-flight. Wednesday, cadets had a major breakthrough in their drone cyber securities class.

Imagine flying a drone when it veers off course and you no longer have the control to bring it back. It's possible someone hacked into the software.

A semester of hard work and research finally paid off. VMI cadets were able to hack this drone, which allows cadets to better understand the technology in order to learn how to prevent cyber security breaches.

"Anyone with the technology that is able to intercept the communication between the drone and it's controller should be able to hack it," said Mohaned Eltoweissy, a professor & the department head of computer sciences.

That's why VMI cadets studying computer sciences said it's extremely important to have full control of the drone. That means understanding its coding and security system.

"We're trying to figure out how this drone works, how this kind of security systems works, what kind of coding, and what kind of operating systems that the drone will actually use," said senior cadet Jin Lee. "And, we came about various methods about how drones communicate with computers."

It's all about communication. The controller can relay the message to the computer which is then transmitted to the drone with GPS software.

After trial and error, this class successfully hacked into its drone's software.

"It takes a lot of time," said Zachary Carter, a senior cadet. "I think we put a good deal of 30 plus hours at least just into this one type of drone. And there's so many types that what works on one may not work on another."

With this brand new technology there are still a lot of unknowns. However, drones are becoming more widely used in the military and are changing the battlefield.

"The impact could be of great damage if the attacker gets hold of a drone and crashes it in a type of building or actually uses it as a type of missal," said Eltoweissy.

It's why VMI cadets are learning how to hack in order to understand the software and protect it.

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