

Special Topics

Last Updated: Sat, 04/04/2026

Course prefix: ECE

Course number: 8803

Section: OCY

CRN

93929

Instructor first name: Saman

Instructor last name: Zonouz

Semester: Fall

Academic year: 2026

Catalog description:

Cybersecurity of Drones is an in-depth exploration of security and privacy challenges in cyber-physical systems (CPS), with a primary focus on unmanned aerial vehicles (UAVs). This course equips learners with the foundational knowledge and hands-on skills necessary to analyze, attack, and defend drone systems in real-world scenarios. You will gain expertise in drone architecture, embedded systems security, adversarial machine learning, and CPS resilience, equipping you to understand and mitigate vulnerabilities in UAV operations. Through lectures, research paper discussions, and hands-on labs, you will engage with cutting-edge cybersecurity techniques, including sensor spoofing, actuator manipulation, malware analysis and defensive mechanisms tailored for autonomous aerial systems. By the end of the course, you will not only have a deep technical understanding of drone cybersecurity but also the ability to design resilient and secure UAV architectures, in preparation for careers in cyber-physical security, embedded systems, and critical infrastructure protection.

Academic honesty/integrity statement:

Students are expected to maintain the highest standards of academic integrity. All work submitted must be original and properly cited. Plagiarism, cheating, or any form of academic dishonesty will result in immediate consequences as outlined in the university's academic integrity policy.