Unmanned aircraft systems club scores high finish in first competition

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The first year of competition has been a winning one for Kansas State University Salina's Unmanned Aircraft Systems Club.

The club just placed seventh at the 10th annual Association for Unmanned Vehicle Systems International Student Unmanned Aircraft Systems Competition, bringing home $3,750 in prize money. The competition was June 13-17 at Patuxent River Naval Air Station in Maryland.

The 28 teams at the event were judged on a written report, an oral flight readiness review, and their performance of a flight mission. In the scenario, competitors supported a team of Navy SEALs by providing intelligence, surveillance and reconnaissance data gathered with an unmanned aircraft system.

The team won cash prizes for its autonomous takeoff and landing and autonomous search and waypoint navigation as well as the American Helicopter Society Best Rotary Wing Award. K-State Salina also was awarded honorable mention on its oral presentation.

The team prepared during the last year for the competition, designing, integrating and performing multiple flight tests of its autonomous unmanned helicopter system. The system is capable of autonomous vertical takeoff and landing, as well as precise waypoint navigation via an onboard autopilot from Cloud Cap Technology. It also is equipped with a gimbaled camera and a wireless video transmission system, which

provide the ground-based flight crew with real-time aerial video and target position information.

The flight portion of the competition required the team to navigate the aircraft to several waypoint coordinates at varying altitudes. The team then had to fly the helicopter to a predetermined search area, detect ground-based targets and identify target color, shape, and coordinate position.

K-State is one of the first two universities in the U.S. to offer a bachelor of science in unmanned aircraft systems. The program uses a hands-on approach for learning and attaining the skills needed to safely operate and manage unmanned aircraft systems.

K-State Salina's proximity to accessible restricted airspace creates an ideal setting for learning to fly unmanned aircraft. The Smoky Hills Weapons Range gives students the ability to gain experience in non-simulated unmanned aircraft system flight. K-State Salina is also one of only a few universities with authorization to fly unmanned aerial vehicles in the national airspace system.

K-State's unmanned aircraft systems program office is home to the Unmanned Aircraft Systems Technology Evaluation Center that evaluates existing unmanned aircraft systems technology and platforms for their suitability in disaster response scenarios and trains operators/maintainers. The program office collaborates with military and civilian organizations to focus on developing unmanned flight in the nation's airspace and training pilots and operators of unmanned aircraft systems.

Provided by Kansas State University