Utah State University’s Department of Aviation Technology and Technical Education (AVTE) has added a new bachelor’s degree paths in aviation management with emphasis options in unmanned aerial systems (aka, drones) and in aviation operations.

The focus of the new degree is to prepare students for a variety of careers beyond pilot and maintenance jobs, including airport management, aviation safety, education and UAS operations.

The new unmanned aerial systems (UAS) emphasis will provide students with the knowledge and skills necessary to prepare them to enter the aviation industry as an unmanned aerial systems operator where a wide range of careers are waiting for qualified professionals, such as research in natural resources, agriculture and other sciences, multimedia and film production, utilities and infrastructure assessment, law enforcement, emergency services, and emerging related fields.

The UAS program complements the existing aviation bachelor of science degrees in professional pilot and maintenance management and will be offered at USU’s main campus in Logan and at USU Eastern in Price as a cross-disciplinary degree incorporating classes outside of aviation. The new program includes training with Aggie Air, under the USU Water Research Laboratory, which uses drones in many aspects of its work in natural resources and engineering research. Expert instruction in topics such as UAS design (both quad copter and fixed-wing models), building, programming, maintenance, photography, flight principles and more will be taught through the AVTE department, and certain emphases will involve classes from other academic units at USU.

The second emphasis, aviation operations, will prepare students with the necessary knowledge for a career in the industry as airport or airfield managers, and other leadership positions. Students will learn about aviation business and administration, air traffic control, human resource management, aircraft dispatch, airport safety, and risk management. The aviation operations option is built on industry need for knowledgeable managers and leaders who have proven responsibility, leadership, and organizational skills to maintain levels of excellence and a dedication to federally mandated rules and policies.

The new degree’s UAS option is built on the demand for and success of the program’s existing UAS minor, with over 480 students having taken courses within the minor and nearly 50 entering or completing the minor in the last two years. There have also been requests for more UAS courses from other departments and programs at USU.

“With the coordination and support of Aggie Air, a drone minor was created in 2017 and has grown to include 100 students, and now a bachelor’s degree,” said Andreas Wesemann, director of the professional pilot program and of the AVTE department’s graduate programs. “Our graduates have already been employed by Northrup, Amazon Prime Air, and other companies. Besides learning the rules and regulations to become a certified remote pilot, our students have fun being engaged in this interdisciplinary degree. From agriculture to military and scientific careers, our students will be prepared for integrated careers with unmanned aerial systems.”

Duke Papworth, UAS instructor said, “With exploding growth in the UAS industry, the need for licensed and skilled UAS operators is only continuing to grow. Preparing students for positions in the many developing areas of
UAS applications is our priority with this new degree. By listening to industry needs in our field, we are ensuring that our curriculum consistently adapts in order to give students the best experience possible.

USU’s professional pilot program saw its enrollment double from 160 students in 2014 to 360 students in 2019, and the department is poised to take on more students with the anticipated growth of over 100,000 jobs in unmanned aerial systems over the next 10 years. Projections from the U.S. Bureau of Labor Statistics and the Federal Aviation Administration, predict 25-30% growth in the field of aviation management in Utah over the next 10 years, with a median expected wage range of $71,030-$73,510, which is more than twice the state’s median wage of $35,010.

Spencer Whitehead, the first student to transition to the new bachelor’s degree program with a UAS emphasis, and who will be among its first graduates, said, “One of the reasons I love USU so much is the level of involvement from the instructors and advisors. This could not be more true than in the aviation department, especially with the UAS courses. I was supported by numerous faculty, staff, and advisors throughout the whole transition process. Their level of involvement helped me recognize just how much they all care about me as an individual and want to see me succeed. I cannot begin to express the gratitude I feel toward everyone who has helped this new degree become a reality.”

The new aviation management degree with both UAS and Aviation Operations emphases officially begins fall semester 2021. For more information about the degree programs, visit the USU aviation website, aviation.usu.edu, or contact the program advisor Marci Chidester at marci.chidester@usu.edu.

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