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56th Fighter Wing Transforms Learning with Embry-Riddle Partnership

LUKE AIR FORCE BASE, Ariz – Training the world’s greatest fighter pilots and combat-ready warfighters is nothing new for the 56th Fighter Wing, where education and innovation merge to create the epicenter of airpower. Operating under the Air Education and Training Command (AETC), the fighter wing has been granted the responsibility to research, teach, and train to fulfill the Air Force’s mission to Fly, Fight, and Win; thus, in February, AETC and Luke Air Force Base took a huge step in expanding the wing’s training potential.

The 56th FW entered into a mutually beneficial Education Partnership Agreement (EPA) with Embry-Riddle Aeronautical University to provide access for undergraduate researchers and software developers to foster the development of new technologies in the aviation and aerospace arenas.

Embry-Riddle, whose Worldwide Campus has been working with military members since 1970, has been a staple for airmen at Luke seeking to earn educational credentials from undergraduate certifications to master’s degrees. Now, with this partnership, Embry-Riddle will offer students the ability to produce deliverables and train in a real-world environment alongside the military.

According to Abby Boggs, the AETC Defense Lab Technology Transfer Manager at Randolph Air Force Base, this EPA enables AETC to promote the education of future scientists and engineers, while enhancing and broadening the professional and technical career development of its personnel through joint research exchanges.

Much of the emerging technologies that will determine our future are no longer created or funded by the Department of Defense, according to Air Force Chief of Staff Gen. Charles Q. Brown’s

Accelerate Change or Lose strategic approach, meaning innovation, partnership, collaboration, and reducing cost and risk are integral to achieving the Air Force mission.

Boggs revealed this EPA addresses Gen. Brown’s strategy by providing information exchanges and research projects in the areas of data management and transfer, electromagnetic spectrum and advanced communications, software development, and machine learning. Other technologies include augmented and mixed reality, artificial intelligence, and autonomous mobility.

The partnership Boggs and her office structured aligns with the Air Force Science and Technology Strategy’s element of investing in science and technology with partners to integrate existing capabilities and mature technologies into innovative, affordable, and sustainable solutions.

Overseeing this five-year agreement with Embry-Riddle is Capt. Wesley Reid, a 56th FW instructor pilot and Innovation Spark Cell lead.

“We got started in February with the objective of pairing Embry-Riddle’s academic expertise to our wing’s problem sets,” Reid said. “The first projects in this five-year agreement will involve students assisting with the digitization of a squadron recall roster. Later, students will

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help work to further develop tools and applications such as an airspace scheduling tool, an aircraft hydraulic maintenance inventory tracking tool, a fighter aircraft launch and recovery tool, and an application to track real-time information for ground transportation.”

As projects become available, Reid believes the ability for the students to gain experience with projects, reports, and presentations by working directly with professionals is one that cannot be replicated in a classroom.

“When problems or innovative ideas arise, we are able to source students and experts in the field to create novel solutions. The students will work through the faculty mentors and Undergraduate Research Institute for reporting process and delivery,” he added.

Looking forward, Reid envisions the mutual benefits as building blocks for both the military and educational institutions as a whole, with student experiences opening the aperture on a potential military career after graduation.

“This partnership really will provide students with hands-on experience on projects aligned with their degree programs and

will expose them to Air Force life in general to see if the military might be a career direction they want to go in,” Reid said. “The students will also get to build networking opportunities within and across programs.”

“Academics in operations research, software development, or mechanical engineering can help us develop kaizen within our processes,” Reid concluded. Kaizen, a Japanese business philosophy term meaning “change for the better”, accurately depicts the focus of this EPA as the 56th FW and Embry-Riddle partner on this five-year innovative journey.

Education Partnership Agreements are offered through the Air Force Research Laboratory’s Technology Transfer and Transition (T3) program office, enabling a broad spectrum of productive interactions with educational institutions. A comprehensive suite of T3 mechanisms for partnering with industry and academia are offered through the office. To find out how you can partner with the T3 Program, please visit <https://www.aft3.af.mil>.



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