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*Controllers receive instruction at the FAA Academy's ERAM lab.*

## Future of Air Traffic Training Starts Now

**A**s the FAA builds a Workforce of the Future, the agency has announced its intent to establish a new center of excellence (COE) focused on training and human performance for the men and women who will be running the air traffic systems of tomorrow.

**T**he National Airspace System is modernizing by leaps and bounds through the application of NextGen technology and procedures, and training for controllers and technicians must keep pace.

**"T**he onset of NextGen will bring significant changes to the specialized skills required to use and maintain systems in the NAS," said Administrator Michael Huerta. "To prepare for these modern systems, the FAA must modernize the way it develops, maintains, and administers training in proportion to the systems themselves."

**"W**e've been working for several years to come to understand the state of our technical training curriculum and understand how to modernize that,"

said David Boone, the ATO's deputy vice president for safety and technical training. The old system of traveling to remote locations for instructor-led training with PowerPoint presentations has become inefficient and outmoded, he noted. "The state of the art has changed," he added. "We want to leap frog ahead instead of continuing to make incremental improvements."

**T**he FAA wants to take advantage of evolutions in teaching, such as part-task trainers, modeling, immersive human-in-the-loop simulation, or adaptive learning technologies that are standard in other technical workforces. FAA databases that store employee information, student performance, curriculum materials, and training requirements need to be linked and centralized to provide the analytics for a national training program.

**T**he FAA is reaching out to academia through its highly successful Centers of Excellence program to research best practices in this "blended" approach to

teaching and learning. The program aims to promote enhancements within aviation by establishing close linkages between education and research activities.

“Academia can offer a range of expertise in the science of delivering learning to students,” said Boone. “The



*Instruction on STARS technology at the FAA Academy.*

resources from this partnership can offer capabilities we don't have within the FAA.”

But the agency's controllers and technicians will continue to have input into the curriculum. Hands-on experience — especially in the case of FAA technicians — will continue to be a requirement, as well.

The COE Program Office has published a notice for the COE public meeting scheduled for Oct. 21-22 in the Washington, D.C. area. A final solicitation for the COE is expected to be issued in December, with a selection slated to occur next May.

Among the areas to be explored are how technical training is conducted and how advancements could be applied in the aviation environment. Also being researched are new training technologies, such as course content development, mobile learning, delivery and management systems, and integration of simulation capabilities. The FAA also wants to understand how the curriculum is analyzed and managed as well as ways to improve techniques to manage learner data.

Human factors will also be examined, such as changes in learner expectations and academic best practices for training a new generation of learners.

The ATO is funding the COE at \$1 million annually for five years, with the selected research group matching that amount at a minimum of one to one.

For additional information about the COE public meeting, the FAA COE Program, and other FAA COEs, see [www.faa.gov/go/coe](http://www.faa.gov/go/coe) or contact Patricia Watts, FAA COE Program director at [patricia.watts@faa.gov](mailto:patricia.watts@faa.gov).

#### About Us:

#### Air Traffic Organization's Office of Technical Training

The Air Traffic Organization's 22,000 frontline air traffic controllers, airway transportation system specialists, traffic management personnel and flight service providers work 24 hours a day, 7 days a week at more than 300 facilities in the U.S. to move America forward. The Office of Technical Training develops the Right Training, for the Right Person, at the Right Time, with an emphasis on the Quality of Training for that technical workforce.

As the FAA transitions to the Next Generation Air Transportation System, the key to providing safe, reliable and efficient air traffic services remains the same: highly skilled, trained and certified professionals. The Office of Technical Training must maintain curricula to keep pace with the evolving National Airspace System, modernize how the FAA trains employees, incorporate new techniques and technologies for learning, and improve data collection and sharing.

#### Centers of Excellence

In 1990 Public Law 101-508 (49 USC Section 44513) directed the Administrator of the FAA to create the Air Transportation Centers of Excellence (COE) program. Through this legislation the Administrator has the authority to make grants to institutions of higher education to establish and operate regional Air Transportation Centers of Excellence.

Since its inception, the COE program has made a major commitment on the part of the FAA to support multi-year and multi-million dollar research efforts, ensuring coordination and innovation across the university teams that make up the various COEs. This investment has resulted in significant advancements in aviation science, technologies, and technology transfer.

The COE program has included over 70 institutions of higher learning and over 200 industry and government affiliates. Through their collaborative efforts, have conducted research in areas which are critical to the FAA and the flying public.

Visit the COE Website at:

[www.faa.gov/go/coe](http://www.faa.gov/go/coe)

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