TTHP

Center of Excellence for Technical Training and Human Performance

Embry-Riddle Aeronautical University and the University of Oklahoma have joined together to lead a world-class research consortium of authorities in air transportation training and related technologies. The Center of Excellence for Technical Training and Human Performance (TTHP) focuses on research and development of technical training for air traffic controllers, aviation safety inspectors, engineers, technicians, and pilots. Our goal is to enhance and advance the teaching of these personnel with part-task training, immersive simulation, and adaptive learning technologies that are standard in other technical workforces. We also analyze human performance issues, including academic best practices and changes in learner expectations, as well as innovative training methods for a new generation of learners.

The universities associated with the COE TTHP are recognized for their air traffic management programs, extensive online degree programs, state-of-the-art aerospace and weather facilities, multi-media and cinematic arts programs, and other specialized areas. Several of our universities and industry partners are researching the latest NextGen approaches to technical training and the associated human performance factors. With our broad range of expertise, the Center meets the challenge of developing and discovering solutions to improve the technical training and human performance for the Air Traffic Organization.

Our Projects

Our projects focus on developing solutions that lead to a safer, more efficient air transportation system. Our current project list includes:

- Field Training Standardization
- Curriculum Architecture Gap Analysis
- Enhanced AT-CPC Training
- Modular Curriculum Design
- Virtual Training Delivery
- Course Development

- Learning Taxonomy Development
- Alternative ISD Models
- Simulation & Part Task Training
- Exploration of Use of Gamification
- Part Task Training Implementation & Enhancement
- Universal Design for Learning & Multi-modal Training
- Applied Game Theory
- Scenario-Based Training for Weather-Related Decisions
- Application of ATC Visual Search Patterns
- Learner Data Management
- Analysis of Technical Operations Job Tasks
- International Harmonization & Integration
- Technical Training Knowledge Architecture
- Training Partnerships with the Department of Defense ATC

Established: August 2016

Research Areas
- Curriculum Architecture
- Content Management and Delivery
- Simulation and Part Task Training
- Human Factors
- Analytics
- Safety
- Program Management

Sponsor:
FAA Office of Safety and Technical Training

http://www.coetthp.org

Core University Partners

- Auburn University
- Drexel University
- Embry-Riddle Aeronautical University
- Interamerican University
- Oklahoma State University
- Purdue University
- The Ohio State University
- The University of Akron
- The University of Oklahoma
- Tulsa Community College
- University of Nebraska-Omaha
- University North Dakota
- University of Wisconsin - Madison
- Western Michigan University
- Wichita State University

Affiliate University Partners

- Central Washington University
- LeTourneau University
- Louisiana Tech University
- OKC Metro Technology
- Polk State College
- Spartan College of Aeronautics and Technology
- Texas State Technical College

- Spartan College of Aeronautics and Technology
- Tennessee State University
- Texas State Technical College
- University of Southern California
- University of South Florida

Industry Partners

Designed to strengthen the Center in all areas of research, the Indus- try Partners network includes over 35 companies who contribute to and advise on sponsored projects. Our Industry Partners are leaders in the fields of aerospace, artificial intelligence, software program- ing, ATC training and simulation, learning development and curricu- lum architecture, airport design, and many more areas. Many stake- holders serve on the COE Industry Advisory Board and attend annual meetings.

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The FAA has also established the following Centers of Excellence:

- Technical Training & Human Performance
  https://coetthp.org/
- Unmanned Aircraft Systems
  http://www.assureuas.org/
- Alternative Jet Fuels and Environment
  https://ascent.aero
- General Aviation Research
  https://www.pegasas.aero
- Commercial Space Transportation
  http://www.coe-cst.org
- Joint Center for Advanced Materials
  http://www.niar.twsu.edu/coe/cecam.asp
  http://depts.washington.edu/amtas