Air Transportation & Aerospace Campus

First envisioned in 2002, the Air Transportation & Aerospace Campus (ATAC) is an up-and-coming teaching and research laboratory, whose focal point, The Ohio State University Airport, is the nation’s premier university owned and operated airport, supporting interdisciplinary learning, discovery, and engagement. The campus is essential to the core university mission of educating students, conducting research, and engaging the broader community by advancing, encouraging, and promoting the industrial, economic, commercial, and civic development of aviation and related fields. It is the primary teaching and research laboratory serving the Center for Aviation Studies, as well as other departments throughout The Ohio State University and beyond.

**Strategic Initiatives**

- A new Terminal Building/Academic Center brings together, in one central location, both the academic and business functions of the Airport
- *Airport Management Co-op Program* allows students to manage the FBO at a local, general aviation airport.
- Advancing the research study of the use of *Environmentally-safe Aircraft De-icing*, and *Runway Incursion Prevention* at smaller, general aviation airports.
- Serving as the permanent home of the *National Intercollegiate Flying Association’s SAFECON* national collegiate flight competition.
- Managing and operating a University *Air Transport Service*.
- Implementing *Direct Bus Service* between main campus and the Aeronautics Campus.

**Development Initiatives**

- A consolidated *Learning & Discovery Center* brings together faculty and researchers into a new state-of-the-art classroom and laboratory facility.
- An updated *Aircraft Training Fleet* of roughly nine new aircraft, including a jet aircraft.
- Creation of an *R&D Park* on the north side of the airfield.
- Acquisition of roughly *145 Acres* from the Board of Trustees.
- Development of *Student Housing*.

**Campus Profile**

- Owned & operated by The Ohio State University College of Engineering
- Size: 1,200 acres, with an additional 65 acres available for the development of new office, R&D, and hangar space.
- Buildings: 312,000 square feet of office, classroom, simulation lab, and hangars.
- Facilities: Three runways and associated facilities.
- Equipment: Eighteen university-owned aircraft, UAS platform, 2 simulators, weather station, air navigation systems.
- Location: Seven miles off campus in northwest Columbus
The Ohio State University Airport (Don Scott Field) is a unique facility in that it is one of the only university-owned and operated airports in the nation, and is essential to the core university mission of educating students. It is the primary teaching and research laboratory serving the Center for Aviation Studies, as well as other departments throughout The Ohio State University. Equipped with an aircraft fleet, UAS, flight simulators, air traffic control, weather station, and communications and navigation systems, the Ohio State Airport is host to numerous aviation and non-aviation classwork and research projects.

The Ohio State University Airport also serves as one of the nation’s leading general aviation facilities, providing aircraft services to many of central Ohio’s pilots and businesses. The facility is essential to the economic vitality of central Ohio, linking local businesses with the global marketplace.

### Airport Enhances Regional Economic Vitality
- $157 million in direct and indirect benefits to central Ohio - *The Ohio State University Airport Economic Impact Study Update 2012.*
- Home to, or used by, Fortune 500 companies and many local small businesses.
- Hub of operations for emergency response, medical, and law enforcement activities.

### Development Initiatives
- Runway extension to 6,000’ provides local companies with access to the global marketplace
- Development of *Corporate Hangars* to accommodate demand for business class aircraft storage.
- Implementing *Custom’s services* to handle incoming international flights
- Development of *T-hangars* to accommodate a waitlist for smaller personal aircraft.

### Airport Profile
- **Built:** 1943
- **Owned & operated by:** The Ohio State University College of Engineering
- **Certified for Commercial Service**
- **Designated a National Priority Airport by the FAA, and a reliever to Port Columbus International Airport**
- **3rd Busiest Airport in Ohio; Nation’s Top 100 Busiest General Aviation Airports**
- **Size:** 1200 acres
- **Runways:** 3 (longest = 5,000 ft)
- **Annual Operations:** 80,000+
- **Based Aircraft:** 220
- **Regular/Student Staff:** 100/35
Each semester, upwards of 300 students are learning airport management or airport planning, enrolled in a flight lab or associated ground course, or participating in a professional development course at the Air Transportation & Aerospace Campus. It is also a study area for students in Aerospace Engineering, Civil Engineering, City & Regional Planning, Industrial Design, Geography, and Chemistry that utilize the facility to enhance their program of study.

Highlights include:
- Airport staff teaches many Aviation courses.
- Provides on-the-job training for future aviation professionals (1/3 of airport employees are students).
- Facilities used by students of other disciplines, including Aeronautical Engineering, Geography, City & Regional Planning, and Civil Engineering.
- Training for Ohio State Public Safety in receiving & protecting dignitaries, and responding to hijackings, drug smuggling, and bomb threats.

Aviation Coursework:
- Airport Management & Airport Planning
- Airport Course Sequence (proposed): Management, Planning, Operations, Business Development, and FBO Management
- Academic Flight Laboratory
- Flight Training Clinic
- Aircraft Flight Test Engineering
- General Aviation Airport Security Seminar
- Airport Safety and Risk Management
- Aircraft Accident Investigation “Bone Yard”
- NATA Safety 1st Ramp Safety Training
- Federal Aviation Administration Safety Seminars

Non-Aviation Coursework:
- Resolving Social Conflict
- Industrial, Interior & Visual Communications
- Design of an aircraft hand-braking system
- Microclimatological Field Methods and Data Analysis
- Urban Planning & Design Studios
- Interdepartmental Seminar in Urban Transportation
- Leaded fuel contamination of soils
- Federal Dept. of Agriculture Human-Wildlife Conflict Seminars
ATAC Supports Interdisciplinary Discovery

A recent survey of the College of Engineering Faculty revealed that at least 20 different research projects, from such disciplines as Electrical Engineering, Mechanical Engineering, Aerospace Engineering, and Aviation are currently being conducted on aerospace and aviation related issues. Research conducted at the Air Transportation & Aerospace Campus include the design of aircraft systems and propulsion at the Aerospace Research Center and the Gas Turbine Laboratory; Safety Management Systems for Small Commercial Service Airports; Understanding Airspace, Objects, and their effects on Airports; and the Economic Impact of Corporate Aviation in the State of Ohio. Many of the findings associated with these studies are tested at the facility, making the campus the location, “Where the theory of the classroom meets the practice of the industry.”

Aviation Research:
♦ Airport Safety Management Systems pilot site
♦ Understanding Airspace, Objects, and their effects on Airports
♦ Economic Impact of Corporate Aviation in the State of Ohio
♦ Smart Paint for Ground Traffic Control
♦ Linear LED Lighting
♦ LED Hot/Cold Testing
♦ Unmanned Aircraft Traffic Management (UTM) System for the State of Ohio
♦ GhostWave’s UAS sensor fusion detect and avoid system
♦ MRO Innovation Hub

Non-Aviation Research:
♦ Department of Geography – Weather studies
♦ Department of Electrical and Computer Engineering – Acoustics study
♦ Department of Food, Agricultural and Biological Engineering – Non-Point Source Pollution (NPSP)
♦ Computer Science and Engineering – DARPA Exscal Sensor Networking
♦ Center for Automotive Research
ATAC Engages the Central Ohio Community

The Air Transportation & Aerospace Campus It is one of Ohio State’s engaged campuses, opening doors to the “American Dream” for over 2,500 Ohio school-aged children each year, including many from central Ohio’s at risk populations.

> Engagement activities include:

- Higher Education
- ProjectSIM
- WiE Rise & WiE Race
- Summer Transportation Institute
- Organization of Black Aviation Professionals Aviation Career Education (ACE) Camp
- Breakfast of Science Champions
- Life Sports Camp
- Young Astronaut Program
- Sponsor of Aviation Explorer Post 2009
- Provides shadowing opportunities for local high school students interested in entering a collegiate aviation program
- Hosts tours of the facility by school groups, scouts, and other individuals
- Host site of the semi-annual Youth Aviation Adventure
- Host site of the Young Eagles airplane rides
ATAC Facilities Development Program

OAAC Academic/Research Hub

- Office: 1,920 ft²
- Labs: 5,525 ft²
- Classroom: 3,600 ft²
- High-bay: 40-60,000 ft²
- Ramp: 30,000 ft²
Information

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