AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS

Historic Aerospace Site

Purdue University Airport

West Lafayette, Indiana

American Institute of Aeronautics and Astronautics

THE AIAA HISTORIC AEROSPACE SITES PROGRAM

For over 65 years, the American Institute of Aeronautics and Astronautics (AIAA) has served as the principal society of the aerospace engineer and scientist. Formed in 1963 through a merger of the American Rocket Society (ARS) and the Institute of Aerospace Sciences (IAS), the purpose was, and still is, "to advance the arts, sciences, and technology of aeronautics and astronautics, and to promote the professionalism of those engaged in these pursuits." Today, AIAA has more than 30,000 professional and 5000 student members.

In addition, AIAA sponsors many technical conferences, seminars, and short courses per year, and publishes *Aerospace America*, the *AIAA Student Journal*, and seven archival technical journals (including one on-line journal). The Institute also publishes conference papers and proceedings, technology assessments, position papers, audiovisual information packages, many books, and a variety of career-related educational materials. The Institute conducts a rigorous public policy program and works closely with other societies and governments in broad areas of mutual concern.

AIAA established the Historic Aerospace Sites Program in January 2000 to promote the preservation of, and the dissemination of information about, significant accomplishments made in the aerospace profession. In addition to Purdue University, other sites recognized by the committee include the original Bendix Aviation Company in Teterboro, New Jersey; the Boeing Red Barn, Seattle, Washington; Kitty Hawk, North Carolina; the site of the first balloon launch, in Annonay, France; and Tranquility Base, on the moon.

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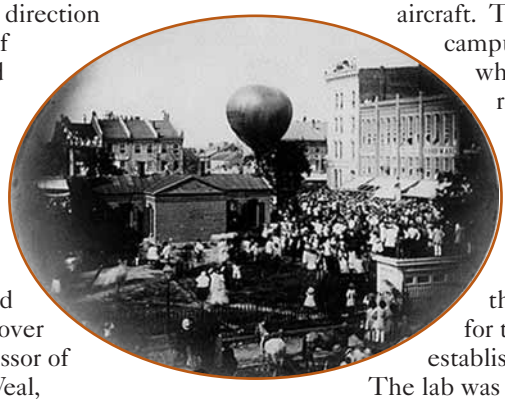
The area around Lafayette, Indiana, has long had an aerospace tradition. Many years before anyone had ever heard of aeronautics, the first airmail delivery in the nation happened by hot air balloon in Lafayette on 17 August 1859. The pilot, John Wise of Lancaster, Pennsylvania, under the direction of U.S. Postmaster Thomas Wood of Lafayette, delivered 123 letters and 23 circulars to Crawfordsville, Indiana, approximately 25 miles away. Wise also conducted experiments to detect the presence of ozone in the upper atmosphere during his flight.



Lafayette enthusiastically continued its aeronautical momentum a little over 50 years later, when a Purdue professor of mechanical engineering, Cicero P. Veal, organized the Purdue Aero Club in 1910, and the area's first mechanized aircraft demonstration took place on Purdue's campus on 13 June 1911. This "Aviation Day," as it was called, was sponsored by a local newspaper and the Purdue Alumni Association, and attracted 17,000 people. Later demonstrations over the next few years continued to attract large crowds.

Aviation Day, 13 June 1911, Purdue Stuart Field.

Aircraft on Purdue Athletic Field, 1918.

Students at Purdue also took an interest in flying. The first Purdue graduate to become an aviator was J. Clifford Turpin, class of 1908, who was taught to fly by Orville Wright. Turpin set an altitude record of 9400 feet in 1911, an alumni tradition continued by Captain Ivan Kinchloe, class of 1949, who flew to 126,000 feet in 1956 in an X-2 aircraft. The first alumnus to land an aircraft on campus was Lt. George W. Haskins, in 1919, when he flew from Dayton, Ohio, with a resolution from Dayton alumni proposing that Purdue establish a School of Aviation Engineering. Lt. Haskins later returned to Purdue as an instructor in 1929.

Purdue first offered five elective aeronautical engineering courses, through the Mechanical Engineering Department, for the 1921–22 academic year, and established an aerodynamics laboratory soon after. The lab was equipped with a fully assembled airplane and operating engines. Although a four-year aeronautics program was not available at Purdue until the 1940s, the students were offered numerous elective courses and many chose the senior aeronautical option, as it was called, to be able to graduate and enter into the new aeronautical industry of the 1920s and 1930s. One early graduate, Donovan Berlin, is known for designing the P-36, P-40, and P-48, all used during WWII.

Also in 1930, through a real estate gift from Board of Trustees member David E. Ross, Purdue University received a gift of a 360-acre tract of land, with the recommendation that it was to be set aside for development of an airport. The original intent of the airport was to serve as a field laboratory for aeronautical education and research. On 1 November of that year, George W. Haskins evaluated the proposed airport location, hung a windsock from a dead tree, and notified the government representatives that airport requirements had been met.

AeroLab 2 with wind tunnel, Curtiss Robin Aircraft and engine, May 1930.

Thus, on 1 November 1930, the U.S. Bureau of Air Commerce designated this land as a landing field—the very first university-owned airport in the United States. Since it was unpaved, the airport served only as an emergency landing strip. Paved runways were added later in the decade, and construction was completed by the Civil Works Administration on the first building, Hangar 1, in 1934. Runway lights were also installed.

Hangar 1 construction, Purdue Airport, June 1934.

Because it had this new airport, Purdue became the first university in the United States to offer college credit for flight training. The training continued through the 1930s, and Purdue became an important military flight-training center during World War II. In 1938, the nation's first Civil Pilot Training Program was also established, and pilot and aircraft maintenance training programs continue at Purdue today.

Aeronautics Class, October 1934.

Aeronautics Class, Hangar 1, Purdue University Airport, October 1934.

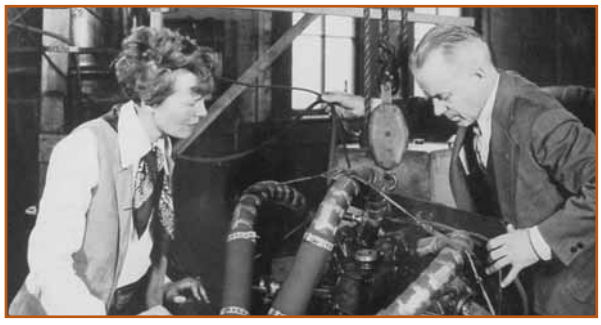
Aeronautical Engineering Class, Purdue University, 1936.

Aeronautical Engineering Class, Purdue University, 1936.

During 1934, Purdue President E. C. Elliott met Amelia Earhart in New York at a Women's Conference on Current Problems. By 1935, President Elliott had recruited her to serve as a consultant for Purdue's flight programs and as a Counselor for Careers for Women. The Purdue Research Foundation provided funding for the purchase of a Lockheed 10E Electra, which was to serve as Earhart's flying laboratory. The Electra was hangared and outfitted at Purdue Airport. During her ill-fated around-the-world attempt, she had planned to conduct research into the effects of long haul fight and pilot fatigue.

During the 1940s, it is believed that Purdue Airport served as the location for the nation's first university flight test course. As part of the war effort, the university developed

Amelia and her Lockheed Electra flying laboratory, Purdue University Airport.



Amelia Earhart and Professor George W. Haskins with engine.

Amelia Earhart and Professor George W. Haskins lecturing students.

Amelia Earhart, Purdue University President Elliott, Captain L.I. Aretz, Hangar 1, Purdue University Airport.

George Putman, Captain L.I. Aretz, Amelia Earhart, G. Stanley Meikle, and President Elliott in front of Hangar 1, Purdue University Airport.

the Air Corps Cadet Aeronautical Engineering Program, an intensive 12-week course given to groups of 50 students in January and April 1941. After this program, the cadets went to Chanute Field at Rantoul, Illinois, for several weeks of practical training, and were then commissioned as Army Air Corps officers. Another training program, for women, was also developed at this time. The Curtiss-Wright Company decided to develop the Cadette Programs to train young women for technical positions normally held at that time by men. Purdue and six other universities participated in these programs. The curriculum consisted of two 22-week terms heavy in drafting, materials processing, and testing.

In 1942, the Purdue Aeronautics Corporation was formed at Purdue Airport to provide live self-supporting laboratories for the aviation program at Purdue. It operated under a government approved supplemental certificate, the only one ever approved for a university. This organization was also responsible for Purdue Airport management and operation.

In 1945, the School of Aeronautics included the Purdue Aeronautics Corporation, the Air Transportation Division, Aeronautical Engineering, and the Graduate Division. Air Transportation had specialty options in flight operations, aviation operations, and aviation administration using aircraft based at Purdue Airport, which were to be used for charter operations. These C-47 aircraft and the Purdue Airport were managed by the Purdue Aeronautics Corporation under the direction of Grove Webster.

During the 1950s, the aviation administration specialty migrated to the School of Management while the flight and aviation operations were transferred to the Division of Technical Institutes (DTI). In 1955, the nation's first Reserve Officer Training (ROTC) flight program was developed at Purdue Airport and managed by Purdue Aeronautics Corporation, and in 1956 a two-year professional pilot program started that accepted students with a commercial pilot certificate. In 1961, the first collegiate Flight Engineer course was approved by the FAA and taught at Purdue University.

Purdue is the site of several other firsts. The General Aviation Flight Training plan of study was introduced in 1964, its coursework leading to the nation's first bachelor's degree in aviation with an emphasis on professional pilot skills. The first collegiate Curtis Wright B707 jet simulator was based at Purdue Airport for use by students earning a Flight Engineer Turbojet certificate along with a bachelor's degree. In 1988, Purdue Airport was the location of the nation's first Diamond Jet Aircraft, used to provide type ratings for Purdue students and transportation for university faculty, staff, and administrators. The Purdue School of Aeronautics and Astronautics, as it is now known, has awarded 6 percent of all B.S. and 7 percent of all Ph.D. degrees in aerospace engineering in the U.S. over the past 50 years. These alumni have led significant advances in research and development of aerospace technology, headed major corporations and government agencies, and have

participated actively in the exploration of space. For example, 22 Purdue students have become astronauts and participated in Mercury, Gemini, Apollo, Shuttle, Mir, and International Space Station flights, including the first (Neil Armstrong) and the last (Gene Cernan) men on the moon.

Significant portions of the text were taken from "History of Aerospace Education ad Research at Purdue University 1910-2002," by A.F. Grandt and W.A. Gustafson. Contributions were also made by Prof. Donald Petrin.

Photos courtesy Purdue University Libraries and The George Palmer Putnam Collection of Amelia Earhart Papers.

Related References

Boomhower, R. "The Aviatrix and The University: Amelia Earhart at Purdue." *Traces,* Summer 1994.

Butler, Susan. *East to the Dawn: The Life of Amelia Earhart.* Reading, Massachusetts: Addison-Wesley, 1997.

George Palmer Putman Collection of Amelia Earhart Papers, http://www.lib.purdue.edu/earhart/, 2002.

Grandt, A.F., W.A. Gustafson, and L.T. Cargnino. *One Small Step: The History of Aerospace Engineering at Purdue University.* West Lafayette, Indiana: Purdue Research Foundation, 1995.

Grandt, A.F., and W.A. Gustafson. "History of Aerospace Education and Research at Purdue University 1910-2002." Paper #2003-0234. 41st Aerospace Sciences Meeting and Exhibit, Reno, Nevada, 2003.

History of the Purdue Department of Aviation Technology, Purdue University Website, http://www.tech.purdue.edu/at/information/athistory.

History of the Purdue School of Aeronautics and Astronautics. Purdue University Website, http://roger.ecn.purdue.edu/AAE/History/History.

History of Purdue, Purdue University Website, http://www.purdue.edu/.

Morrissey, Muriel Earhart. *Courage is the Price.* Wichita, Kansas: McCormick-Armstrong Publishing Division, 1963.

Purdue Aeronautics Corporate tri-fold brochure, Purdue University.

Purdue *Exponent,* 14 May 2002.

Purdue Libraries Newsletter, Volume 1, Fall 2002.

Purdue News, Purdue University Website, http://news.uns.purdue.edu/uns/.

Rich, Doris L. *Amelia Earhart: A Biography.* Washington, DC: Smithsonian Press, 1989.

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