

Program Review

Executive Summary

Aviation Technology

Majors Reviewed:

- *Aviation Maintenance Technology (BAV), B.S.*
- *Aviation Technology (AD), A.A.S.*
- *Aviation Maintenance Technician (AC), Certificate*

April 2014



The aviation technology program has its origins in the 1930s, training Lycoming Engine employees. The program draws students from the mid-Atlantic region and is unique in its bachelor of science degree option. Approximately 50% of entering students are baccalaureate seeking. The industry has experienced two employment declines: one after 9/11 and the other after the 2008 recession. However, these changes were temporary, and air traffic has returned to pre-9/11 activity levels.

The large and varied fleet of aircraft, including a Boeing 727 cargo plane, on which students learn, as well as the avionics offered in the junior and senior year, sets Penn College's aviation technology majors apart. The program also functions as an FAA-approved repair station. Maintaining the fleet, acquiring updated airframes and purchasing the latest generation avionics equipment is expensive, and resources are stretched. In addition to expense, manpower for maintaining the fleet is limited. Partnering with supporting companies such as Lycoming Engines and FedEx are avenues to gain resources and public exposure.

Further industry partnerships and collaborations with feeder schools (secondary and post-secondary) are being pursued. The bachelor's degree affords the opportunity to form articulation agreements with airframe and powerplant schools, such as Aeronautical High School in New York City. The FAA is pleased with the graduates of the program, and the advisory committee and employers speak highly of the program. The program is well situated for further expansion and providing the skills needed by the aviation workforce of today and tomorrow. Despite these commendations, minor revisions to the curriculum are needed to maintain currency and correct scheduling issues.

The following recommendations are based on elements of this review and the participation of faculty, advisory members, and administration.

- Increase corporate training opportunities to other aviation industries to include composites.
- Continue replacing older aircraft with more modern airframes.
- Hire a lab technician to help maintain aircraft and assist in oversight of students to ensure safety.
- Update turbine engines to more modern models and update test cell controls with quick disconnects.
- Increased corporate/association sponsorship, donations, scholarships, and intern sites.
- Add transport aircraft lab tasks to existing courses.
- Continue to increase marketing efforts to a wider geographic area to encompass the mid-Atlantic region.
- Monitor written, oral, and practical exam results to determine possible curriculum adjustments. Probable areas of development include helicopters and soft skills. A plan is to be developed for improving powerplant scores.
- Return the A-6 to GSA, as it is impossible to obtain parts, and it has outlived its usefulness.

- Market opportunities to airframe and powerplant school graduates and technicians for transfer to the four-year major, Aviation Maintenance Technology.
- Explore possible opportunities with Penn State's aerospace engineering department.
- Assist the Workforce Development & Continuing Education division with an instructor replacement strategy for the Lycoming Engine offerings.
- Increase staff development opportunities on newer aircraft, avionics, helicopters, and composites.
- Develop a replacement plan for aging equipment in the avionics lab, most of which were purchased over 10-years ago.
- Review and revise the four-year major to encourage more elective courses and to address scheduling issues.