



United States Air Force

Aerospace Propulsion Outreach Program (APOP)

2026-2027 University Application

APOP is a friendly design competition to design, build, and test a modification on a small gas turbine engine. Each year there is a different design challenge, e.g., developing a variable area nozzle or a bleed air heat exchanger. APOP exposes students to propulsion as a career opportunity. As part of a growing program, we have implemented an application process to emphasize the desired commitment from the universities.

The project will start in September, so the students have adequate time to develop a working design before testing in April. The APOP program will only be successful when there is strong support from the participating university. Our expectations for the university are as follows.

1. An *engaged* faculty advisor who will advise and guide the student team through the design process.
2. Implementing a process to ensure the students are committed and accountable.
3. The existence of an appropriate facility at the university to safely run the engine.

In turn, you can expect the following from the APOP Program.

1. Funding for the university to run the APOP project. This is \$14,000 for each school. Additional funding is provided for travel up to \$6,000 depending on location.
2. Government mentors for each team to help guide the student's design and answer questions about employment opportunities within the Air Force.
3. An opportunity to test and compete with the finished design at an Air Force facility.
4. A seminar about employment opportunities within the Air Force.
5. A poster session for the students to present their work.

The program will be executed through Innovative Scientific Solutions, Inc. (ISSI). Applications will be accepted until 31 May 2026. Please submit applications and any questions by email to afrl.apop.applications.int@afrl.af.mil.

Important Notes

- APOP aligns with the Fall-Spring school year (Sept-April). Universities requesting to begin participation in January will not be accepted.
- Universities with outstanding invoices remaining on 30 June 2026 from Milestones 1-4 from the previous year will not be accepted.

APOP University Application

Please answer the questions below. The university advisor should be the one answering the questions. Formatting is up to the advisor. The completed application should be 2-4 pages long.

University and Department: university name and department name

Advisor: advisor name

Advisor Email: advisor email

1. The success of an APOP project at a school is heavily dependent on advisor involvement. Explain how you plan to support the students throughout the project. What is your planned level of commitment? How many hours per week will you spend advising the student? What are the anticipated roles and responsibilities relative to the students? How will other faculty and university staff support the students?
2. Students are expected to design, build, and test a working modification to a hobby jet engine. This includes constructing a university-owned and operated thrust stand, data acquisition system, engine, and support hardware. Student teams are also expected to host multiple design reviews throughout the year demonstrating progress to the Air Force program managers and mentors. These reviews ensure the student team is prepared for testing at an Air Force base in the spring. Explain how students will be held accountable for working on the APOP project. Will the project be a senior design project, a capstone project, or a club? When will the students start working on the project? How many hours will they work on the project each week?
3. The success of an APOP project at a school is also heavily dependent on the support provided by the university. Explain the resources and support that the university will provide to the students. How will the students manufacture hardware for their design? Where will the students test their engine? If there is not an existing facility, what are the plans to build that capability? What safety procedures are in place?