How can a High School student become a Purdue student flying an original experiment with NASA?

In AAE418 Zero-Gravity Flight Experiment, a unique course at Purdue for juniors and seniors in Aeronautics and Astronautics in the College of Engineering.

The School of Aeronautics and Astronautics (Engineering) at Purdue has become the leader in the NASA Reduced Gravity Student Flight Opportunity Program or RGSFOP for short. Since 1997 over 100 Purdue students have flown in weightlessness, or zero-gravity, with 30 original experiments that were proposed, designed, built, and performed by the students themselves. All of these students started as high school students who chose to come to Purdue and study aerospace engineering. They completed their first two or three years of learning and then enrolled in AAE 418.

Students in this exciting class apply valuable lessons from the entire curriculum to create an original experiment to study or test a topic requiring weightlessness. Space flight fluids control for propulsion and life support systems, basic fluid physics, and deployable lightweight space structures, are examples from past experiments.

Students interested in an open-ended, team-based, multi-disciplinary, real-world, no answers in the back of the book style of engineering experience and education should enroll in AAE 418. Students who are not interested in the zero-gravity flight time also take the course to benefit from the experience. The laboratory and machine shop facilities in the School of Aeronautics and Astronautics provide uniquely powerful educational space for the class.

If you have a passion for aerospace, want to learn in AAE 418 or other open-ended student project classes, and want a chance to deliver successfully in a challenging engineering project, then come to the School of Aeronautics and Astronautics at Purdue University. Become a part of Purdue’s history of 22 Astronauts and over 100 zero-gravity student fliers.

Relevant URLs:
- School of Aeronautics and Astronautics: https://engineering.purdue.edu/AAE/
- Purdue University: http://www.purdue.edu
- NASA RGSFOP: http://microgravityuniversity.jsc.nasa.gov
Effects of end-cap shape on a two-dimensional zero-gravity liquid slosh experiment, March 1997

Perform your experiment while floating in weightlessness

Operation of the Cassini Spacecraft surface-tension propellant management system and possible reduced-mass version of the system.