



# HIGH SCHOOL AVIATION INITIATIVE STEM CURRICULUM INTRODUCTION



## INTRODUCTION

The AOPA Foundation offers a six-course, two-pathway (pilot and unmanned pilot) [high school aviation STEM Curriculum](#). The Curriculum, written by former high school teachers, administrators, and curriculum development specialists, is a [STEM.org](#)-reviewed educational media. Key attributes include:



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- Teaches STEM through the lens of aviation by engaging students in project-based learning, engineering design challenges, and engineering experiments,
- Prepares students to earn CTE stackable credentials such as the FAA Private Pilot Knowledge Test, FAA Remote (Drone) Pilot Knowledge Test, and FAA Remote Pilot Certificate,
- Guides students through CTE-related experiences, career portfolio development, business plan writing, and semester-long CTE capstone projects.
- Schools can choose any one, some, or all the courses and either or both pathways.

## IT'S FREE - NO COST TO IMPLEMENT

Curriculum access, online professional development, program and teacher support, and [student AOPA membership](#) are all **FREE**.

## CHECK OUT THE CURRICULUM

Our Curriculum website is <http://aopa.org/curriculum>. At the site, you'll find an extensive overview of the Curriculum. In the website section entitled COURSE DESCRIPTIONS, you'll find course pacing guides, materials lists, sample 5e lesson plans mapped to NGSS, CCSS, and FAA Airman Certification Standards, teacher presentations, activity handouts, and teacher notes.

## WHO CAN IMPLEMENT THE CURRICULUM

The Curriculum is available to schools and organizations that can offer the courses for high school credit to five or more students per course selected. Examples include:

- Public, private, parochial, and charter high schools and school districts.
- Regional Career and Technical Education Centers and other career programs.
- Homeschool co-operatives in the United States.
- Museums and other community organizations that offer high school credit-based courses

## PROGRAM IMPACT AT-A-GLANCE

In the 2022-2023 school year:

- More than 530 teachers in 400 schools in 43 states offered more than 1,550 class sections of AOPA Foundatoin Curriculum-based instruction to more than 16,300 students.
- The Curriculum reaches populations historically underrepresented in aviation, with 50% students of color and 22% female students.

In the 2021-2022 school year and the first semester of the 2022-2023 school year, Curriculum students achieved nearly 2,900 aviation milestones:

- 2,088 started flight training
- 228 passed their FAA Private Pilot Written Exam
- 78 earned the FAA Private Pilot Certificate

- 467 passed the FAA Part 107 (drone pilot) Written Exam
- 17 completed the FAA Instrument Pilot Knowledge test
- 6 earned the FAA Instrument Pilot endorsement.
- The program graduated 1,152 students in its first year of full, four-year implementation.
  - 75% of graduates intend to pursue postsecondary education.
  - 60% of graduates intend to pursue an aerospace-related STEM career, including 21% of graduates who intend to pursue a career as a pilot.

## STATE AND UNIVERSITY VALIDATION

- State governments acknowledge the value of the Curriculum.
  - Multiple states have approved the Curriculum for use as regional (e.g., Texas) and state (e.g., Oklahoma, South Dakota) Career and Technical Education (CTE) pathway courses.
  - Some states, such as Oklahoma, allow students to use AOPA Foundation classes for core academic classes toward graduation.
  - AOPA Foundation team members have helped create or revise state-level CTE pathways and programs of study in Kansas, Pennsylvania, South Dakota, and Virginia.
- Additionally, 81 colleges and universities across 21 states offer articulation agreements or dual enrollment credit for AOPA Foundation courses.

## RECRUITING AND PROMOTIONAL MATERIALS

- Tri-fold [High School Initiative brochure](#)
- [Curriculum impact data](#)
- [Curriculum student testimonial](#) and [Teacher testimonial](#) videos
- [Course sequence and course description](#) document
- [Links to High School Initiative informational resources](#)
- [High school recruiting PowerPoint presentation](#) used when speaking to school districts and their stakeholders
- [Video intro Introducing the AOPA Foundation High School Aviation STEM Curriculum](#) (5 min)
- [Deeper Dive: Curriculum Overview](#) (20 min)
- [From Great Idea to Day One of Instruction: Getting Started with an Aviation Program](#) (25 min)

## AOPA FOUNDATION HIGH SCHOOL AVIATION STEM SYMPOSIUM

Each year, the AOPA Foundation hosts an annual High School Aviation STEM Symposium, bringing together dedicated educators from around the nation for three days of sharing insights, ideas, and best practices for starting and building aviation STEM programs.

The 2023 Symposium will be held November 12-14 at the Hyatt Regency Orlando International. Find out more about the 2023 Symposium [at this site](#).

With more than 400 attendees, 62 speakers, and more than 40 aviation and aerospace corporate and organizational exhibitors, the 2022 FedEx AOPA Foundation High School Aviation STEM Symposium Presented by Boeing was our biggest ever!

Don't forget that all streamed sessions of the 2021 AOPA Foundation High School Virtual Aviation STEM Symposium presented by Boeing are [free at this link](#).