# Building Pipelines: High School Partnerships through Choose Aerospace

A crash course for part 147 programs

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AVIATION TECHNICIAN EDUCATION COUNCIL
ATEC

## About

Choose Aerospace is a partnership of aerospace stakeholders, joined together to address one of the biggest threats to continued industry growth: the availability of a diverse, qualified technical workforce.

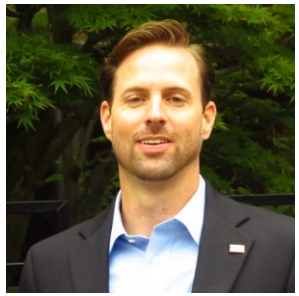
The charitable organization is managed by the Aviation Technician Education Council, a non-profit trade association that represents aviation technical education, including nearly 75% of all FAA-certificated aviation maintenance technician schools in the U.S.

# Leadership

President
Ryan Goertzen, AAR CORP

Vice President
Kevin Dallaire, Peidmont

Secretary/Treasurer
Joel English, AIM



Director
Justin Madden, AMFA

Director
Tammera Holmes, AAI

Advisory Director
Sean Torpey, FAA

Executive Director
Crystal Maguire

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Aziz Sulaim, Lead Business Development

Sacha Berwin, XR SME

John Jensen, Lead Programmer

# Advisory Committee Members

AAR Corp
Aircraft Maintenance Technicians Association
Aircraft Mechanics Fraternal Association
American Airlines
Aviation Institute of Maintenance
Aviation Technical Services
Aviation Workforce Solutions
Delta Air Lines
Duncan Aviation
Federal Aviation Administration
General Atomics
Horizon Air and the Alaska Air Group
Liberty University
Marshall University
Mentoring Mission
National Transportation Safety Board (former board member)
Oklahoma Department of Career and Technical Education
Pathways to Aviation
Piedmont Airlines
Portland Community College
Professional Aviation Maintenance Association
ROTORDOC LLC

# Pilot Schools

**Crowley Academy of Aviation**
Crowley TX

**Des Moines Public Schools**
Des Moines IA

**Dubisk Career High School**
Grand Prairie TX

**Grand Island Senior High**
Grand Island NE

**Jefferson Union**
Daly City CA

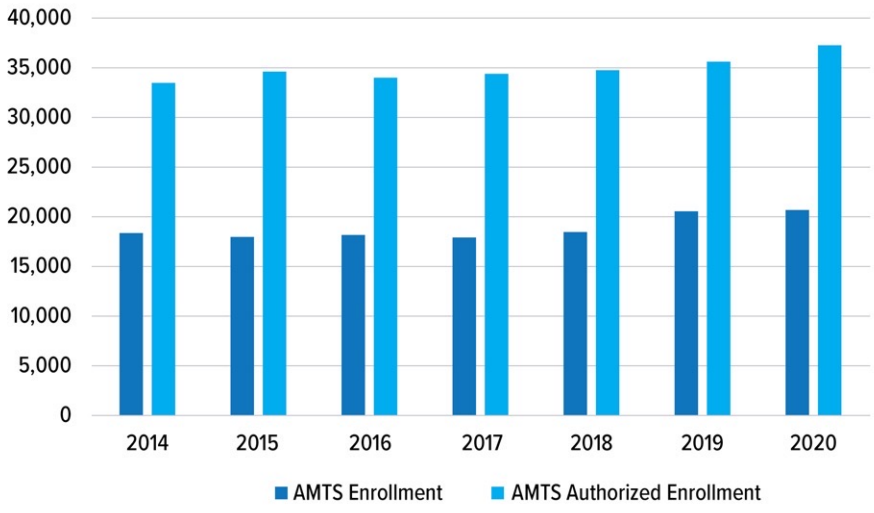
**Liberty High School**
Hillsboro OR

**Mid-Del Technology Center**
Midwest City OK

**Vienna High School**
Vienna IL

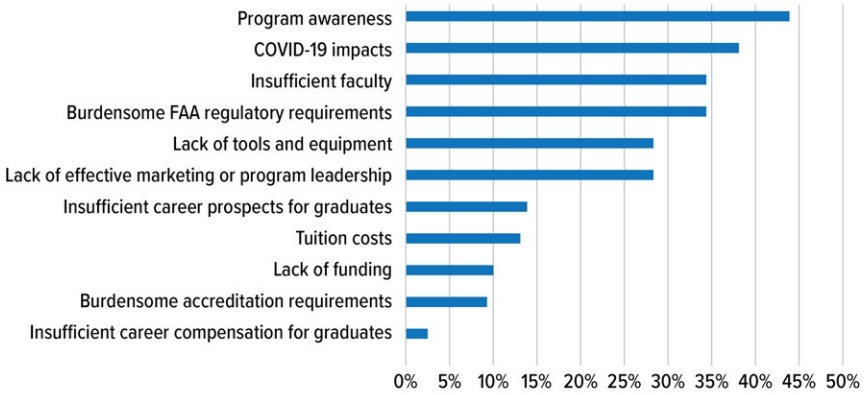
**VIPER Transitions**
Anchorage AK

**Urban League**
St Louis




# The Challenge

- Only a quarter of AMTS report an 80 percent or better load factor.
- The percentage of available seating capacity filled with students is 56—down 1.3 basis points from last year.
- Nationally, nearly two out of every five available AMTS seats remain open




# The Challenge

Lack of program awareness has been consistently cited as the biggest barrier to growing aviation programs.

# Aviation Maintenance Curriculum

- Eleven modules cover the general subject areas in the FAA Mechanic Airman Certification Standards
- Intended for deployment in high schools to **create awareness in aviation careers**, and to provide direct employment and matriculation opportunities into A&P schools
- Limited equipment and materials required, supplemental hands-on elements available
- License fees $200 per student, per year

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# OPTIONAL HANDS-ON ELEMENTS

- ”Table top” projects are in development
- Covers skill areas already addressed in the platform
- Optional and adjustable, recommended tool and equipment list available

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# Curriculum

## FAA ACS AM Overview

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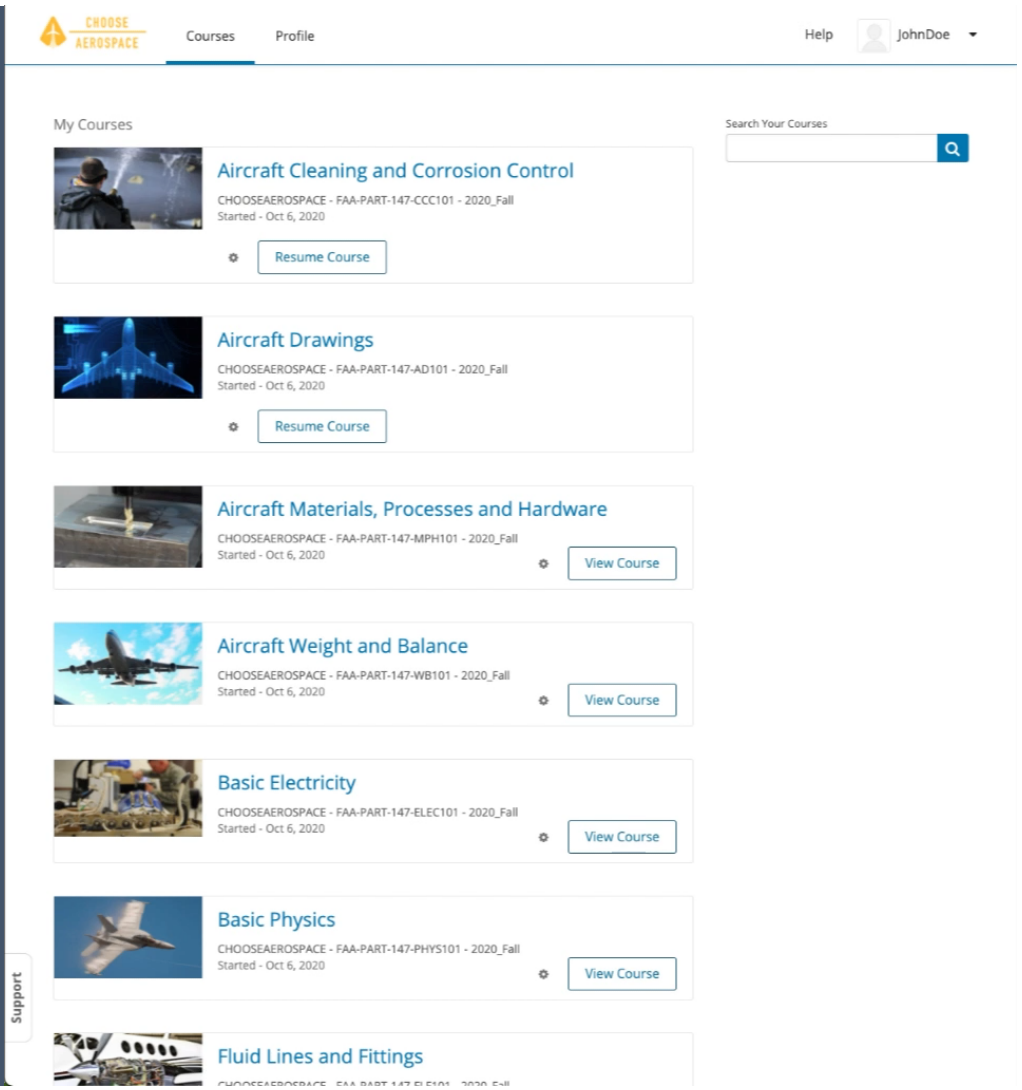


# Learning Platform **Login**

**Web Address:**
https://learn.chooseaerospace.org

**Register Account**

- Complete the form and click the link within the activation email (for continued use of platform).
- Do this before logging in or getting courses assigned.

**Login Account**

- All students and instructors will need to authenticate before viewing assigned curriculum.
- Course dashboard page shows list of curriculum enrolled.

# Course Components

**Course**
*"Fluid Line and Fittings"*

- **Module(s)**
  *"Module 1: Rigid Fluid Lines"*
  - **Lesson(s)**
    *"Lesson 1.3 Fabricating Rigid Fluid Lines"*
    - Objectives
    - Video Lectures
    - Interactions
    - Immersive Virtual Reality
    - Open Text (FAA Part-147 Handbook 8083)
    - Interactive Assessments

## Learning Platform Components

Video Lectures

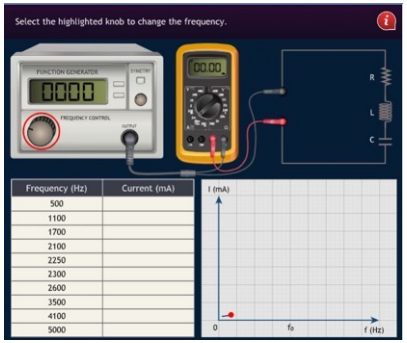
Interactions + Virtual Reality

Open Text

Interactive Assessments

# Computer-Based **Engaging Content**

The curriculum includes video lectures, interactive assessments, interactions and virtual reality to simulate hands-on learning.

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# Demonstrative **Videos**

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Lecture **Videos**

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Concept **Visualizations**

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# Interactions

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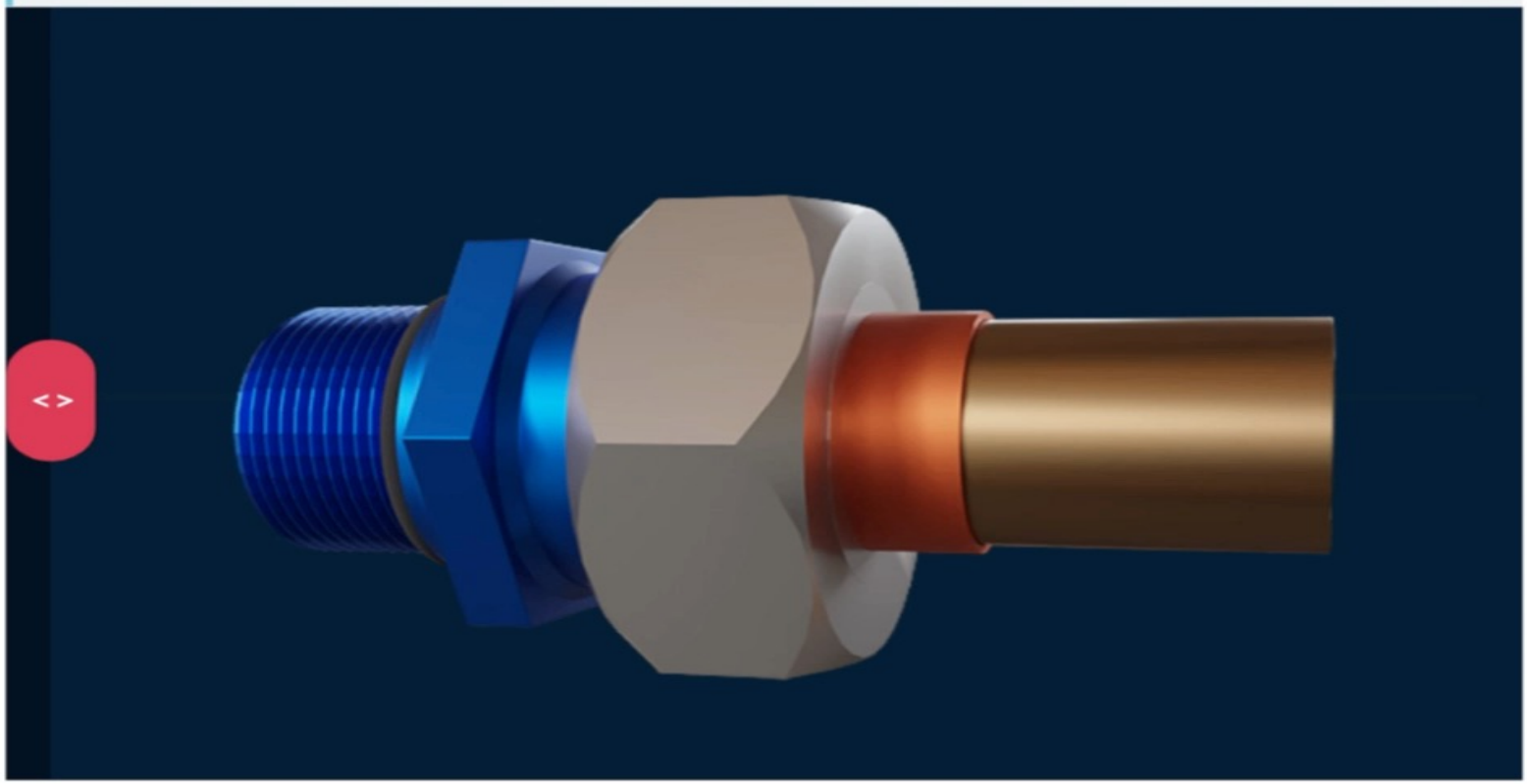
This interaction should be used to reinforce learning of AN Flare Fitting cross-section. Move the slider to view the cross-section.



Enhanced **Interactions**

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# Virtual Reality (VR) **Simulations**

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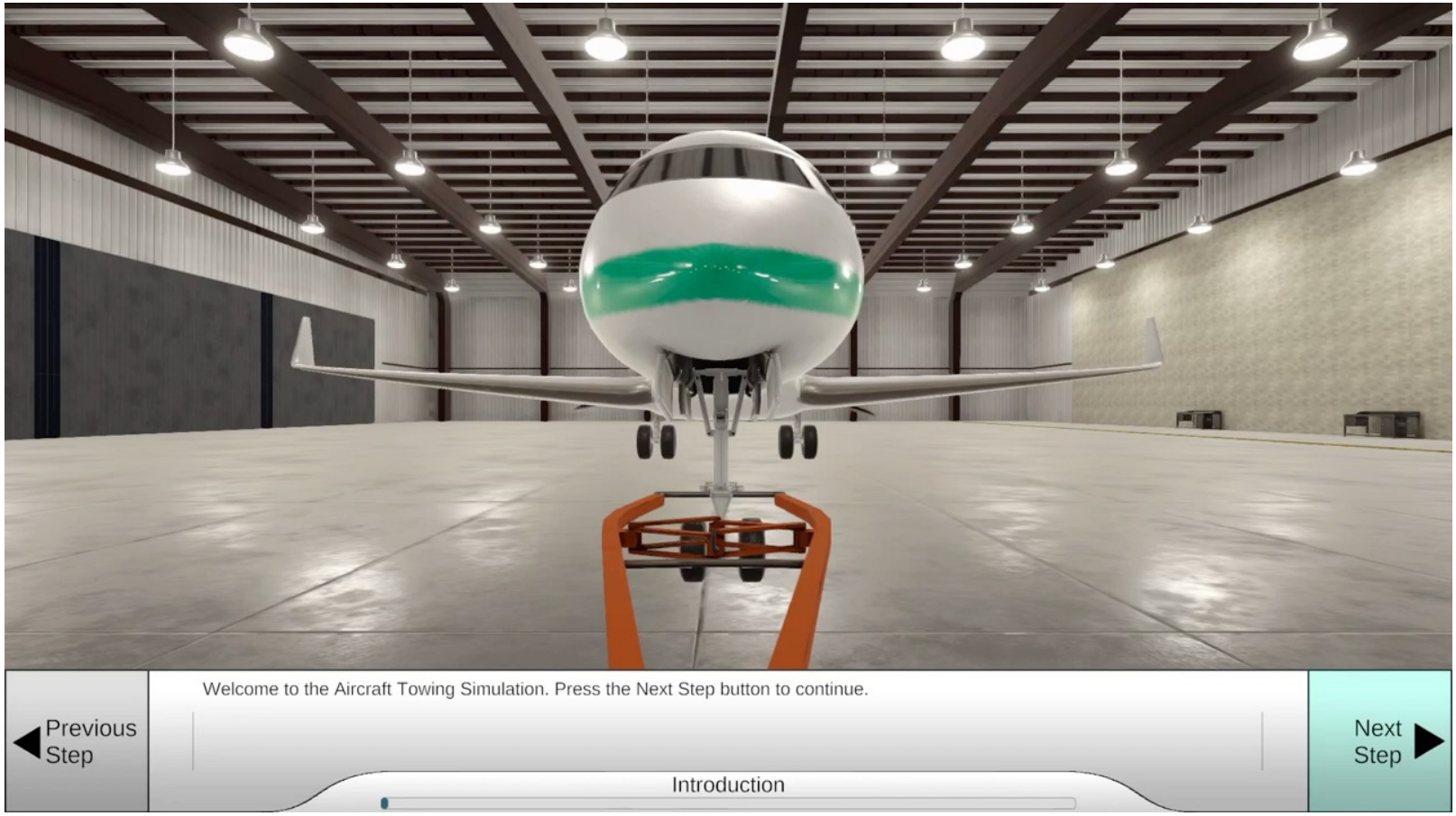

## Open **Text**

Robust open textbooks are provided for all courses. This traditional learning tool is a perfect complement to the other forms of online content.

**FAA Aviation Maintenance Technician**

- FAA-H-8083 Handbook

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# Interactive **Assessments**

Reinforcement of learning materials through immediate feedback as well as an instructor-led grading system are both available.

**Problems Types**

- Multiple Choice
- Multiple Select
- Numerical Input
- Drag and Drop
- Open Response

**Module Types**

- Lesson Activities
  - Multiple Attempts
- Module Reinforcements
  - Limited Attempts

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# Instructor Dashboard

Overview

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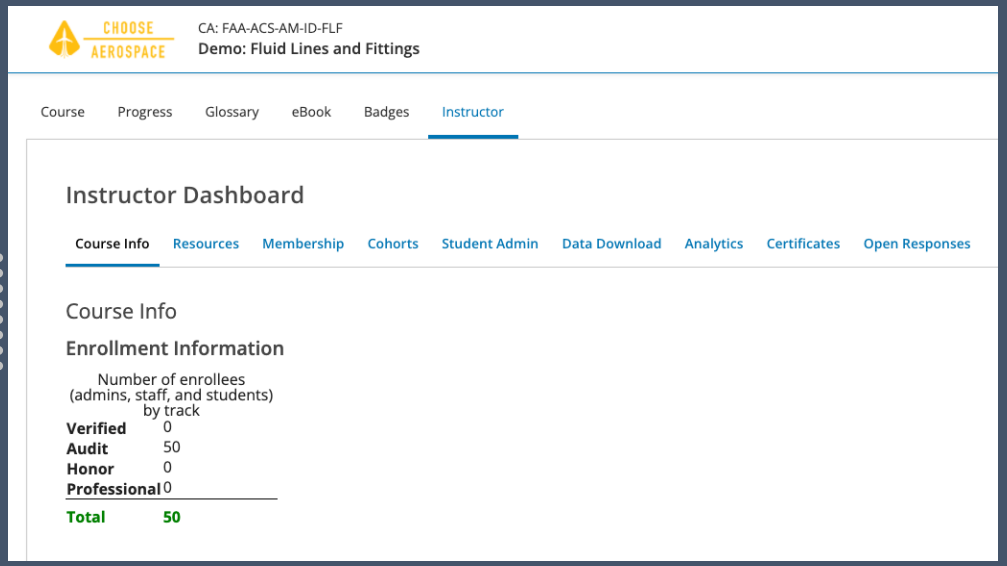

# Student **Enrollment**

## How do I register/unregister bulk learners in my course?

**Answer:** Use the *Instructor Dashboard > Membership > Batch Enrollment* form.

## How can I see learners not yet enrolled in my course?

**Answer:** Use the *Instructor Dashboard > Data Download > Reports > Download a CSV of learners who can enroll.*

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# Student **Progress**

How is my class doing in this course?

**Check progress with the following actions:**

- Gradebook
- View Specific Learner's Grades and Progress
- View Course As Learner
- Generate Grade Report

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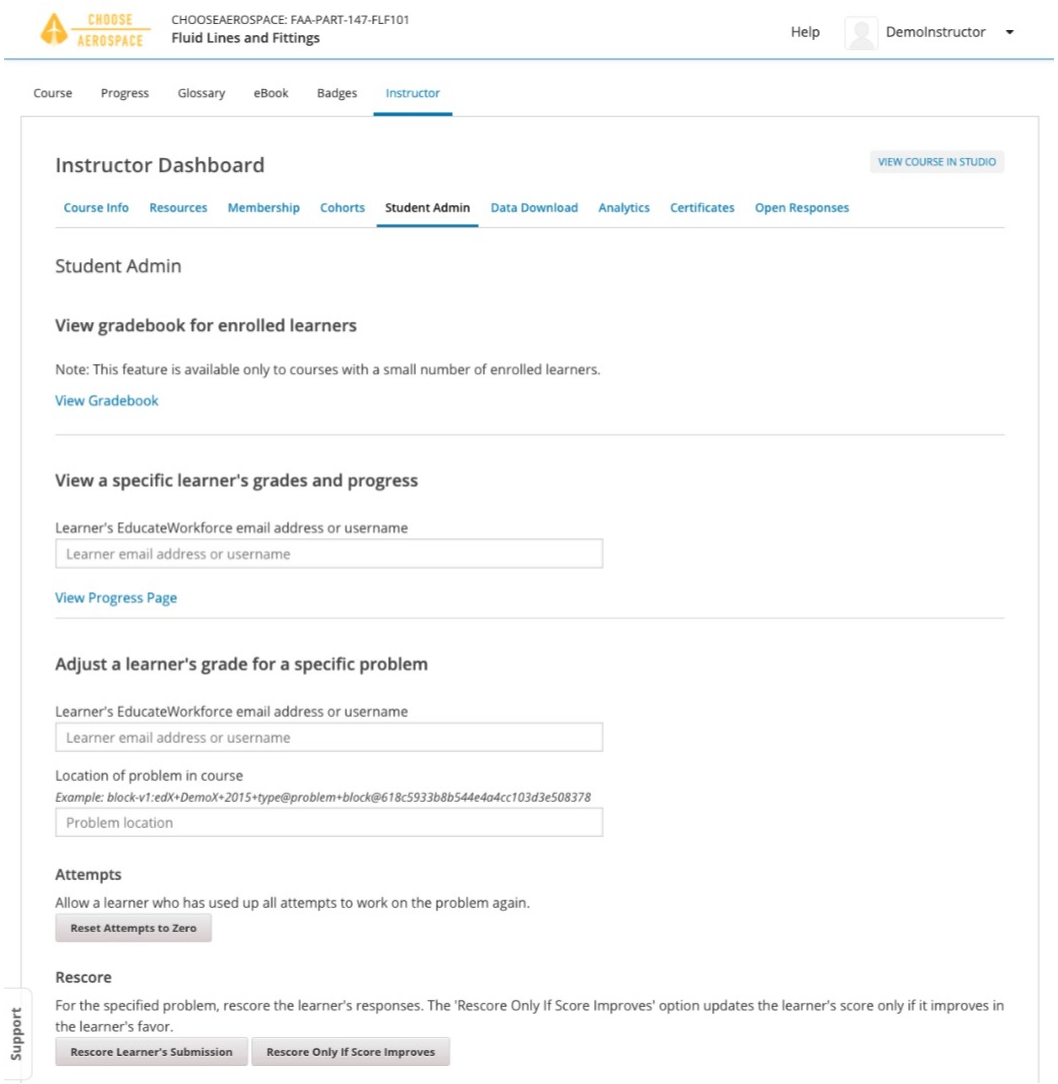

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# Support

Curriculum and Platform

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# General **Support**

**Request Help**

- For any questions related to the course please use the Support form located on left bottom of every Learning Management System (LMS) page.
- Report issues on the same page using the support form when available.

**Communication**

- Messaging with the support team is handled through email.

**Email:** support@educateworkforce.com

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# Support **Knowledge Base**

**FAQ Page**
Provides quick answers to common questions

**Help Topics**
Provides category grouping of related articles

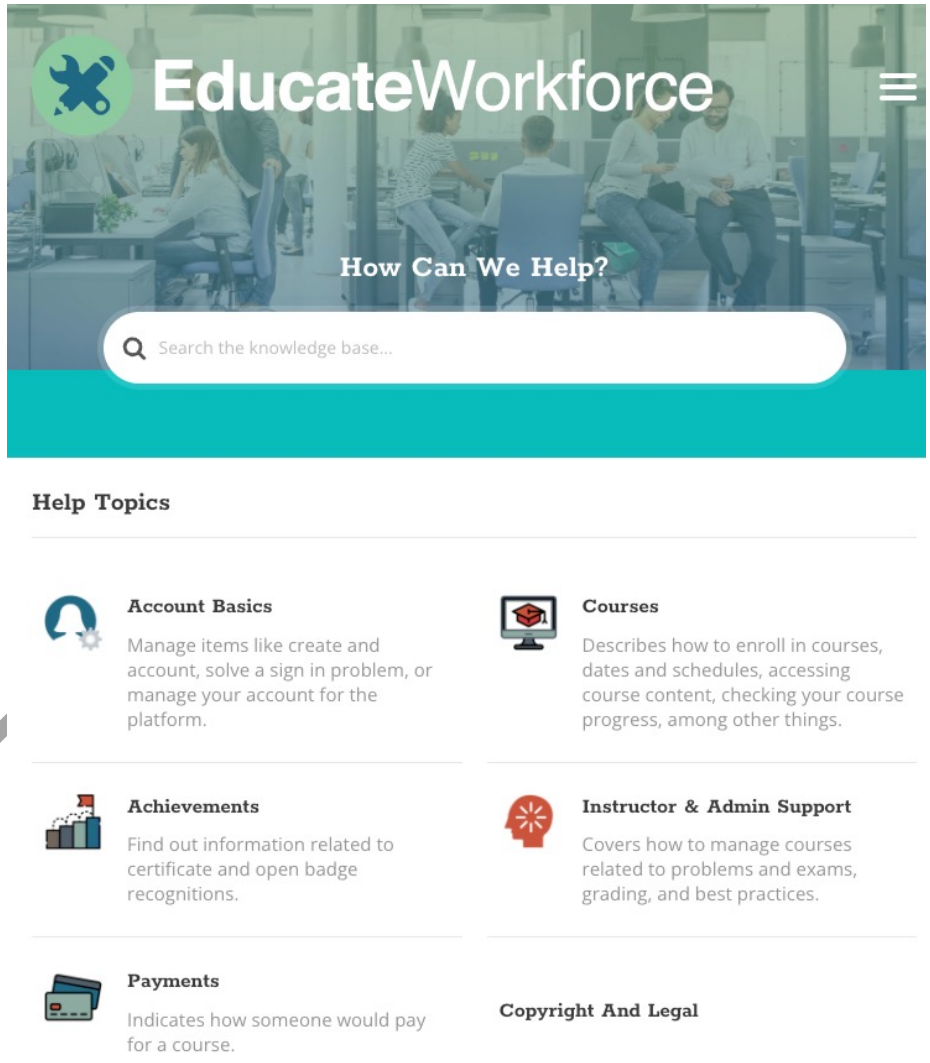
**Popular Articles**
Documentation that is either new or popular

**Search Bar**
Locate support articles faster

**Support Button**
A way to contact support through form submission

Support

**Web Address:**
https://support.educateworkforce.com



# Instructor & Admin Support **Category**

Provides articles related to the following areas:

**Grading**

- Verify graded and course completion progress

**LMS**

- Switching roles

**Problems & Exams**

- Reset Problem Attempts

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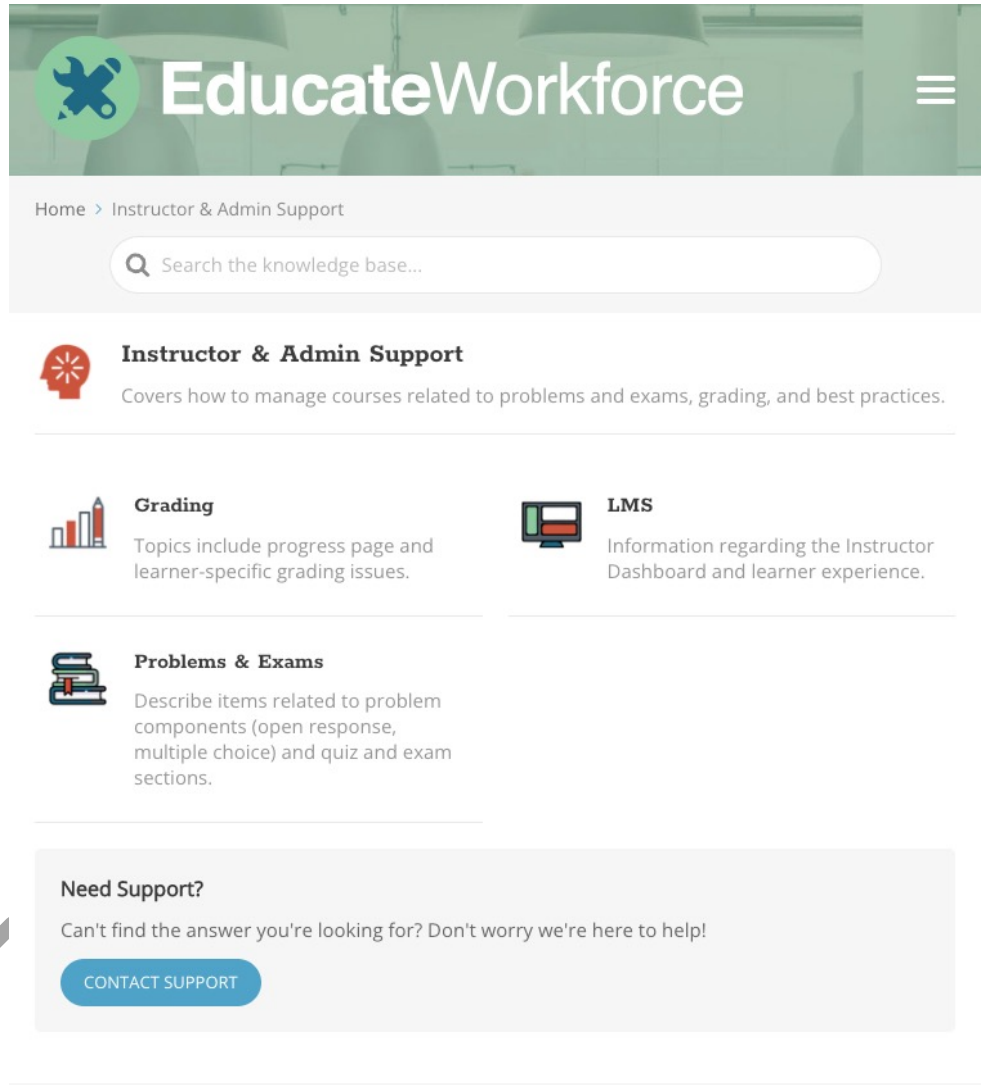

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# Graded **Progress**

Provides articles related to the following areas:

**Grading (Instructor)**

- How Do I Check Learner Progress?

**Courses (Learner)**

- How Can I Check My Course Progress?

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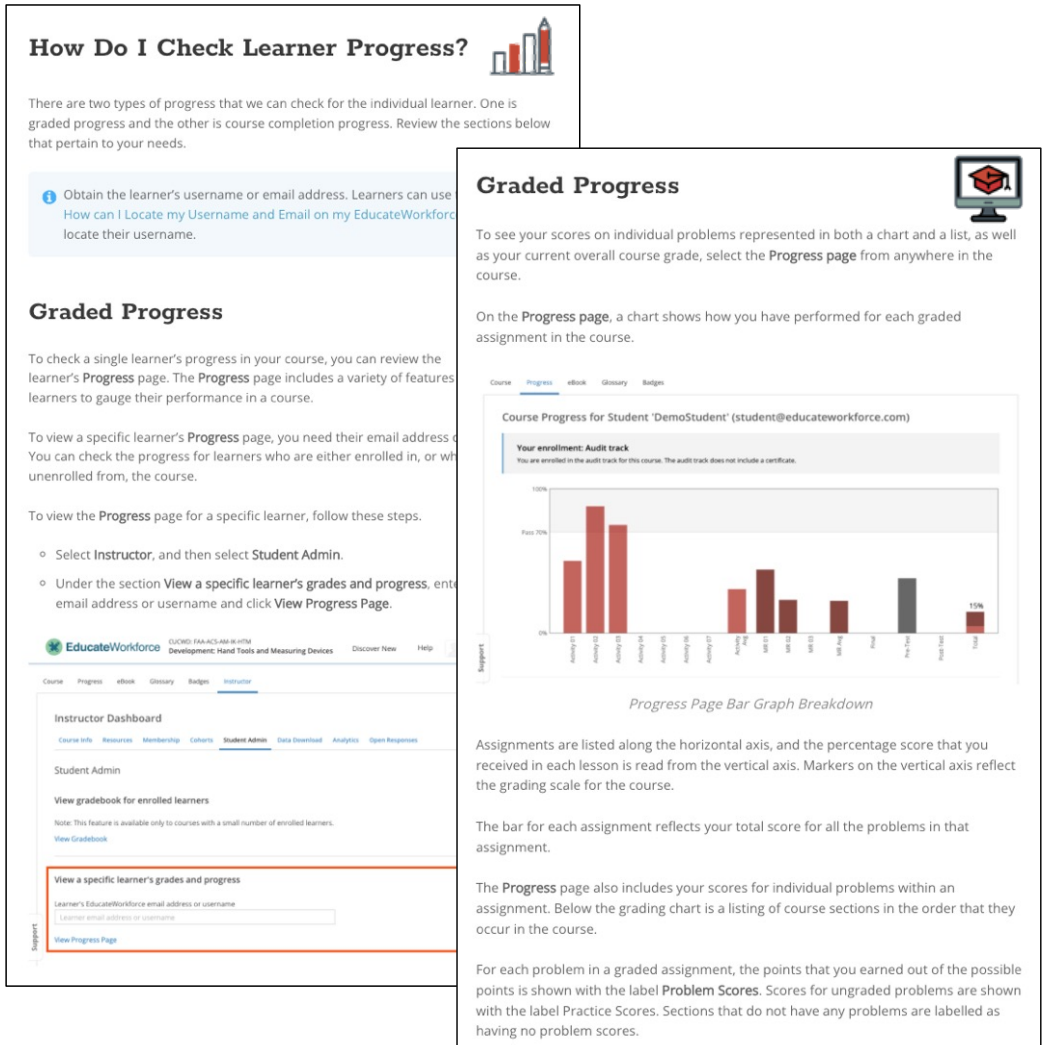

## How Do I Check Learner Progress?

There are two types of progress that we can check for the individual learner. One is graded progress and the other is course completion progress. Review the sections below that pertain to your needs.

Obtain the learner's username or email address. Learners can use
How can I Locate my Username and Email on my EducateWorkforc
locate their username.

### Graded Progress

To check a single learner's progress in your course, you can review the learner's **Progress** page. The **Progress** page includes a variety of features learners to gauge their performance in a course.

To view a specific learner's **Progress** page, you need their email address
You can check the progress for learners who are either enrolled in, or wh
unenrolled from, the course.

To view the **Progress** page for a specific learner, follow these steps.

- Select **Instructor**, and then select **Student Admin**.
- Under the section **View a specific learner's grades and progress**, ent
email address or username and click **View Progress Page**.

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Instructor Dashboard

Student Admin

View gradebook for enrolled learners

View Gradebook

View a specific learner's grades and progress

View Progress Page

## Graded Progress

To see your scores on individual problems represented in both a chart and a list, as well as your current overall course grade, select the **Progress page** from anywhere in the course.

On the **Progress page**, a chart shows how you have performed for each graded assignment in the course.

Course Progress for Student 'DemoStudent' (student@educateworkforce.com)

Your enrollment: Audit track

*Progress Page Bar Graph Breakdown*

Assignments are listed along the horizontal axis, and the percentage score that you received in each lesson is read from the vertical axis. Markers on the vertical axis reflect the grading scale for the course.

The bar for each assignment reflects your total score for all the problems in that assignment.

The **Progress** page also includes your scores for individual problems within an assignment. Below the grading chart is a listing of course sections in the order that they occur in the course.

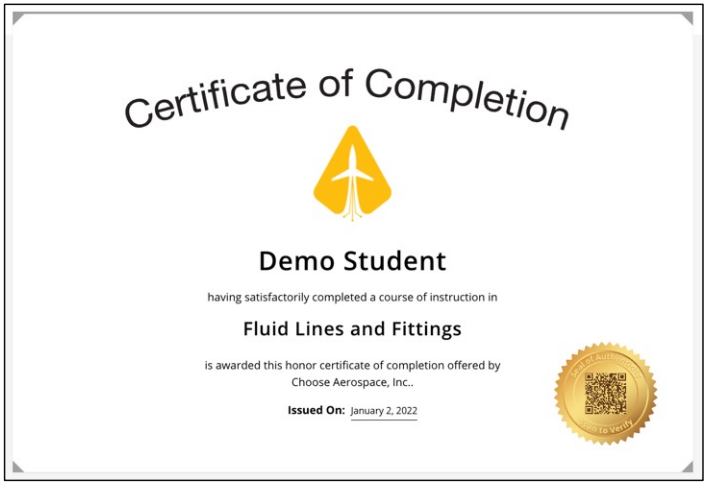
For each problem in a graded assignment, the points that you earned out of the possible points is shown with the label **Problem Scores**. Scores for ungraded problems are shown with the label Practice Scores. Sections that do not have any problems are labelled as having no problem scores.

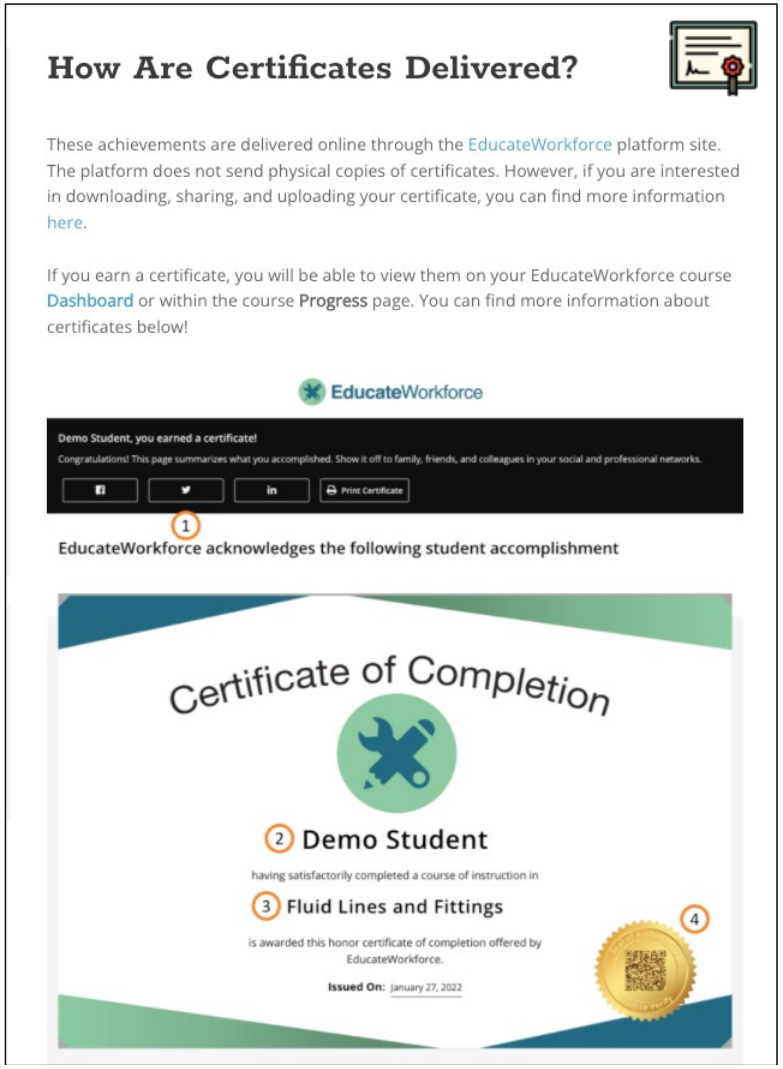
# Certificate **Achievements**

Provides articles related to award recognition for the learner:

Certificates

- How are Certificates Delivered
- Where Can I Find My Course Certificate?



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# FAA Curriculum Adoption

Platform Metrics, Petition for Exemption, FAQ, Credit

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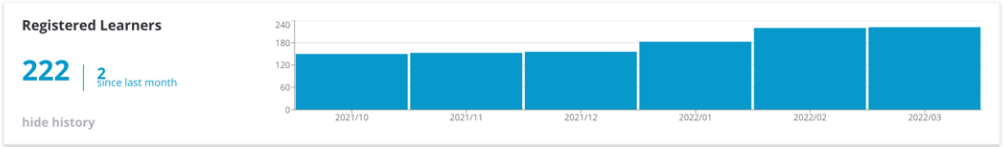
# Platform **Metrics**

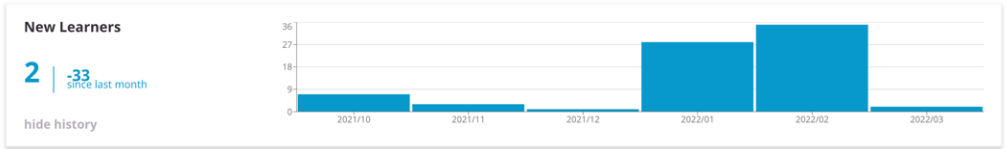
## Monthly Active Users (MAUs)

- For a given period (calendar month), the number of unique learners that have accessed the platform at least once.

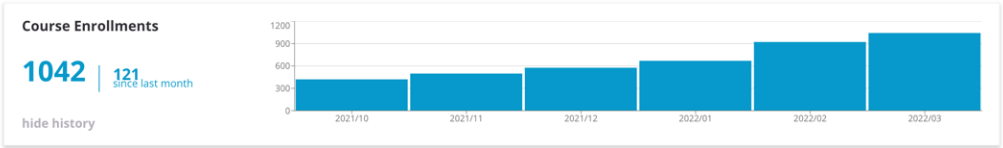
| Period | Monthly Active Users | Difference vs. Previous Period |
|---|---|---|
| 2022/03 | **96** | -2 |
| 2021/12 | **98** | +30 |
| 2021/11 | **68** | -15 |
| 2021/10 | **83** | -14 |
| 2021/09 | **97** | -2 |
| 2021/08 | **99** | +66 |
| 2021/07 | **33** | N/A |




- Total users that have created an account on the platform.




- Total new users that have created an account on the platform.




- Total times registered learners have enrolled or been enrolled in course(s) on the platform.

- Total times learners across all courses have completed a course and been awarded a certificate of completion.

# Petition for Exemption

- Choose Aerospace filed a petition for exemption from § 65.77 asking the FAA to give students that complete the Choose Aerospace maintenance curriculum the opportunity to take the FAA general written knowledge test.
- If granted, the exemption would:
  - provide an often-necessary credential for high school technical programs
  - encourage matriculation agreements into secondary education,
  - provide third-party validation of knowledge for employers.
- FAA response expected by Jan. 7.

# Commonly Asked Questions

- Is the curriculum FAA approved?
- How can I transfer credits without knowing seat time?
- How am I supposed to issue credit if the students haven't *touched* anything?
- How much credit should I issue?
- How will this be different under the new part 147?

# Regulations Governing Issuance of Credit § 147.31(c)(2)

[T]he school may credit a student with instruction or previous experience:

(1) A school may credit a student with instruction satisfactorily completed at

(i) An accredited university, college, junior college;

(ii) An accredited vocational, technical, trade or **high school**;

(iii) A military technical school;

(iv) A certificated aviation maintenance technician school.

(2) A school may determine the amount of credit to be allowed -

(i) **By an entrance test equal to one given to the students who complete a comparable required curriculum subject at the crediting school**;

(ii) By an **evaluation of an authenticated transcript** from the student's former school; or

(iii) In the case of an applicant from a military school, only on the basis of an entrance test.

# Next Steps

- Visit chooseaerospace.org/curriculum
- Identify local coalition and high school partners
- Invite Choose Aerospace leadership to brief stakeholders
- Teacher professional development scheduled for June 8-9 in Tulsa

www.chooseaerospace.org