OUR VISION

THE *IMPORTANCE* of STEM

Science, Technology, Engineering, and Mathematics

According to a report on Science, Technology, Engineering, and Mathematics (STEM) education, increasing opportunities for young Americans to gain strong STEM skills is essential if the United States intends to continue its remarkable record of success in science and innovation. (National Science and Technology Council, 2013)

STEM education is responsible for numerous advances. From mapping the human genome, discovering water on Mars, or developing the Internet, these accomplishments would not have been possible without a skilled and creative STEM workforce.

Our vision is to be recognized worldwide for our excellence in high school concurrent enrollment Aerospace Education. This will enable Embry-Riddle to be the world leader in providing the STEM industry with graduates who are explorers, pilots, inventors, entrepreneurs, astro-navigators, and leaders for the twenty-first century.

Science, technology, engineering, and math knowledge and skills are in greater demand as the United States confronts a fiercely competitive international marketplace where the advantage goes to companies that are the first to invent and produce innovative products.

Fewer than 40 percent of students who major in a STEM field actually graduate with a STEM degree. Only 19 percent of U.S. undergraduate degrees are awarded in STEM fields.

Our Concurrent Enrollment Program (CEP) proudly presents itself as a possible solution to this complex problem.

OUR MISSION

To positively impact the trajectory of high school students by preparing them to successfully complete an undergraduate STEM degree and connect them to a profitable career in the aerospace industry.

How does OUR PROGRAM accomplish this task? By providing ***rigorous curriculum and credentialed instructors. With this combination the high school students will have the following advantages:***

College Preparation—College-bound seniors will transition from high school to college and be prepared for their first year of college work.

Great Expectations—Data shows that concurrent enrolled graduates are highly motivated achievers. College admissions officials view these students as low-risk prospects who are unlikely to drop out, rarely pursue time-shortened degrees, and often go beyond the undergraduate degree to study at the graduate level.

Greater Challenges—Our program offers genuine ERAU courses, so the coursework is more demanding than high school curriculum. Students will be college ready when we offer the right college readiness tools, programs, and services. As a result, concurrent enrolled graduates tend to be more adaptable, self-motivated, reflective, and innovative. In other words, they are college ready!

Quality Control—Our program continuously evaluates the quality of services it provides students, parents, high school administrators, teachers and university faculty. With our evaluation process we will continue to offer innovative and challenging ERAU courses to qualified high school students at their local high schools, during their regularly scheduled high school day.

Managing Growth— Every year, more courses are developed and field-tested for potential inclusion in a high school curriculum. Our program offers continuous professional development for our high school teachers by providing training from our ERAU instructors.

Program Overview

Aerospace Career Academy offers Embry-Riddle Aeronautical University courses in the following subjects to high school students in their high schools during the school day.

- **High school instructors are credentialed by the disciplined colleges and meet the academic departments' requirements for teaching the Embry-Riddle courses.**
- **Courses are taught on the high school campus and follow the high school schedule.**
  - **Connections to successful industry certifications and completion of the program.**
  - **Embry-Riddle Aeronautical University courses are currently taught in 43 high schools with over 2,200 participating students.**

Possible Course Offerings

- **Principles of Aeronautical Science**
- **Private Pilot Operations**
- **Unmanned Aircraft Systems**
- **Aviation Legislation**
- **Unmanned Aircraft Systems Robotics**
- **Flight Physiology**
- **Aviation Mathematics and Physics**
- **Fundamentals of Electricity**
- **Tools, Materials and Processes**
- **Aircraft Familiarization and Regulation**
- **Spatial Reasoning**
- **Principles of Management**
- **Engineering Drawing**
- **Fundamentals of Computer Programming**
- **Survey of Meteorology**
- **Introduction to Computing in Aviation**
- **Introduction to Engineering**
- **Introduction to Computing for Engineers**