CREC Academy of Aerospace and Engineering

(Grades 6 to 12)
A STEM Education
CREC Academy of Aerospace and Engineering staff believe it is their duty to help every student explore, develop, and mature to their highest potential. They are passionate about creating a school that sees every student as an individual, and they also help students see themselves as a part of a school community of active, caring, and innovative learners. They do this by creating a unique curriculum that challenges students through theme-based experiences. Curriculum is taught by a dynamic staff in a rigorous and encouraging learning environment. Growth happens through the continuous improvement of students, staff, and the school.

CREC Academy of Aerospace and Engineering draws on inspiration from the finest traditions and practices embodied in Connecticut’s aerospace, engineering, mathematics, science, and technology industries. The academy helps students develop both the skills, and the confidence, to succeed in the demanding global marketplace of the 21st Century. The mission is aided by the academy’s unique affiliation with the nation’s leading aerospace, engineering, medical, and biotechnical companies and institutions that provide students with opportunities for guest speakers, mentors, project engineering support, independent research, financial support, and summer employment through summer internship programs.

**Middle School Program (Grades 6-8)**

In the middle school program, students develop an understanding of both the academy’s theme and its culture. Through numerous collaborative activities, field trips, guest speakers, activities in core curriculum subjects, and projects, students explore all aspects of aerospace, engineering, biomedical technology, and mathematics. Simultaneously, staff members help students to internalize the school’s values of respect, growth, and active learning.

Rigorous instruction is an essential aspect of both the curriculum and culture. All students receive rigorous instruction in the humanities and core curriculum classes. The humanities encourage creativity, inventiveness, and persistence, further preparing students for advanced honors courses at the high school level.

CREC Academy of Aerospace and Engineering fosters a number of community partnerships that provide middle school students access to hands-on experiences and real-world exposure in the fields of aerospace and engineering. The school has unique partnerships with Birken Aerospace, which gives all students a tour of their facility, and the Kaman Corporation, which offers grade 8 students mentorship opportunities within Kaman’s aerospace, business, finance, and data divisions. Partnerships with UConn’s engineering ambassadors, St. Joseph’s College engineering program, and other academic institutions offer students opportunities to work with mentors in the area of robotics, and they allow students to participate in programs that focus on women and minorities in engineering.

A special relationship with the New England Air Museum gives middle school students access to the facility and resources. It also connects students to the museum’s docents, mentors, and experts. These, and other assured experiences, bring to life the belief that, “Students have to see it, to know that they can be it.”

**The High School Program (Grades 9-12)**

The high school program builds upon the strong academic and cultural foundation of students’ experiences in middle school by ramping up both the rigor and the variety of unique, thematic studies and opportunities available to maturing students. The academy’s high-level elective courses are designed to offer students compelling alternatives to a traditional secondary experience. Students in advanced math and science classes can be paired with industry internships that focus on their areas of interest. Other courses are offered in the areas of medicine, photonics, nuclear chemistry, computer science, engineering design, leadership in science, engineering, and medicine. There are a variety of biological science courses and advanced mathematics electives beyond calculus that are also available. Throughout all courses the focus is on continuous improvement.

Students are further prepared for future career challenges by participating in unique programming, such as robotics, drone construction labs and the RV-12 project, where students build a passenger plane. They also learn by conducting independent and Capstone research projects in state-of-the-art student labs.

CREC Academy of Aerospace and Engineering students gain fundamentally important experience by regularly applying classroom lessons to real-world situations during these intensive programs.

CREC Academy of Aerospace and Engineering offers industry partnerships, theme-based career pathways, and a rigorous core curriculum for students. Students gain skills and experiences in science, technology, and engineering, and math that prepare them for college and high-demand professional careers. Focused student success plans allow students to enter competitive undergraduate programs that match their aptitudes, interests, and goals.