Mission Statement

"To enhance education for better workforce development; and to ignite tomorrow's innovators while developing the most valued engineering and manufacturing workforce to compete in the global market."

Program Intent

Improve education in America by inspiring students, teachers, and administrators within the present educational system. Motivate and equip high school students to develop 21st Century skills and pursue careers in science, technology, engineering, and mathematics.

Program Description

A proprietary four-year, sequenced, STEM curricula developed and maintained by *SystemsGo* that meets Career & Tech Ed (CTE) course objectives, aligns to Next Generation Science Standards (NGSS) and targets mastery of P21 Century Learning and Workforce Skills. Curricula covers introductions to the R&D industry and innovation; mechanical drafting/CAD for working drawings capture; and applied physics of main energy systems - mechanical, electrical, thermal, fluid - through design, build, and test projects.

Educational Approach

- Learning primarily through application, not memorization.
- Project-based teaching that engages all types of learners.
- Knowledge and skills are reinforced and expanded through increasingly complex project goals.
- The possibility of project failure, and its analysis if it occurs, is part of the learning experience.
- Life skill development in problem-solving, critical thinking, cognitive reasoning, project management, teamwork, leadership, and R&D skills and innovation are incorporated.

Accreditation

- *SystemsGo* curricula fulfills standards in CTE course objectives, NGSS and P21 Century Skills.
- AutoCAD curriculum is an articulated credit with an industry user certification availability.
- *SystemsGo* is certified as a Continuing Professional Education (CPE) Provider.
- Certified by the Space Foundation and supported by NASA, US Army, Boeing and SAIC.

Successes to Date

- 65% of *SystemsGo* high school graduates are pursuing studies in STEM-related fields.
- *SystemsGo* alumni now work for NASA, commercial and private companies, the military, and military/aerospace contractors.
- Teachers in Texas, New Mexico, Utah, Oregon, and Colorado have been professionally trained to implement *SystemsGo* in their schools.

SystemsGo Course offerings

Introduction to Engineering – Fundamental and foundational knowledge of teamwork, leadership, and R&D skills across multiple engineering disciplines.

AutoCAD – Introduction to mechanical drafting through Austin Community College.

Tsiolkovsky Level – Application of knowledge in the 4 main energy systems through the design, build and test of a rocket to take a 1lb payload 1 mile high.

Oberth Level (PREQ: Tsiolkovsky Level) - Application of knowledge in the 4 main energy systems through the mathematical modeling of, design, build and test of a rocket to break the sound barrier.

Goddard Level (PREQ: Oberth Level) – Design, build and test a rocket to take a payload 80K – 100K ft launched at White Sands Missile Range.