



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 four-year, sequenced, STEM curricula that meets Career and Tech Ed (CTE) course TEKS and HB-5 requirements and receives CTE funding. 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, team work, leadership, and R&D skills and innovation are incorporated.

Accreditation

- The Texas Education Agency has approved *SystemsGo* for STEM Endorsement for graduation.
- Sophomore curriculum is an articulated credit with an industry user certification availability.
- *SystemsGo* is certified as a Continuing Professional Education (CPE) Provider for the State of Texas.
- Endorsed by NASA, Space Foundation, US Army, Boeing, SpaceX, SAIC, Texas Space Grant Consortium, Texas A&M, and Texas State Technical College.

Successes to Date

- 65% of *SystemsGo* high school graduates are pursuing studies in engineering.
- *SystemsGo* alumni now work for NASA, commercial space companies, private space 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.

STEM Endorsement

Principles of Applied Engineering
Introduction to Engineering
PEIMS # 13040200

Engineering Design and Presentation I
AutoCAD
PEIMS # 13041000

Scientific Research and Design*
Tsiolkovsky Level (minimum prerequisite
concurrent enrollment in Alg 2)
PEIMS # 13041700

Engineering Design and Problem Solving*
Oberth Level
(prerequisite Tsiolkovsky Level)
PEIMS # 13041200

Engineering Design and Presentation II
Goddard Level (prerequisite Oberth level)
PEIMS# 13041100 – 2 credits

*Science Credit