



### **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 21<sup>st</sup> 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 across Texas and New Mexico have been professionally trained to implement *SystemsGo* in their schools.

### **STEM Endorsement**

Principles of Applied 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