



Engineering Support Technologies – Rocklin High School

5301 Victory Ln, Rocklin, CA 95675 • 916-632-1600 • dfrank@rocklin.k12.ca.us

Engineering Futures - Designing Success

What is RHS EST?

We are a secondary (high school) program that is dedicated to preparing students for entry into engineering and manufacturing education, and workforce. We focus on design through the use of the latest versions of SolidWorks and Mastercam, while utilizing contemporary machine tool practices using both manual and computer controlled (CNC) mills, lathes, routers and lasers. We also participate in SkillsUSA to provide students with the opportunity to develop leadership skills, and compete using their technical skills.

Vision

To educate, enrich and excite students about careers in engineering and manufacturing

Mission

To provide young engineers with the knowledge, skills, abilities and certifications needed to enter a manufacturing or engineering related apprenticeship, career or college opportunity

RHS EST Highlights

- Voluntary student enrollment has doubled in the last three years
- As of AY2010-11, every student enrolled in EST has been a member of SkillsUSA
- All of our SkillsUSA drafting competitors have qualified to the California State SkillsUSA Competition for the past three years.
- Our SkillsUSA Student Leadership Team has organized a service learning project to enhance our campus and student experience. They will be organizing our members to rebuild the decks of our ASB trailers (float trailers).
- We have partnered with NASA Education at Cape Canaveral to design multiple trophies for the Lunabotics Mining Competition, which are given to the winning collegiate teams. Our partnership includes the Sierra College Center for Applied Competitive Technologies, where designs are transformed to final product on their 3D Printer.
- Over the past three years we have raised funds from grants, donations and the district totaling more than \$200,000. These funds have been invested in the facility and machinery to meet the needs of 21st century employers.
- Over 50% our program completers continue their education in a university engineering program. We have students everywhere from Berkley to Kansas to Florida.

Program Goals

RHS EST wants to be relevant to students, employers, colleges and universities. As such, we strive to forge partnerships with all stakeholders. Many of our partnerships are tailored to the stakeholder. Some only desire to speak to our students. Others choose to open their doors for tours. Yet others prefer to donate time, equipment or money. We constantly seek partnerships that help our students decide if engineering, design or manufacturing are possible future careers. Any partnership that helps out students talk with or see what engineers and technicians do are of interest to our students, program and instructor.



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About the Instructor

Dan Frank is starting his fourth year of teaching Engineering Support Technologies, and his tenth year of teaching at the high school and middle school level. Mr. Frank also holds a half time lectureship in the department of Plant Science at the University of California, Davis where he instructs students in the use of computers to enhance agricultural business, education and research. He has worked in both fabrication/machine shops, and design environments prior to teaching. Mr. Frank has a B.S. in Agriculture, and a minor in Applied Agricultural Engineering from UC Davis. He also holds a M.S. in Industrial Technologies from Fresno State. Mr. Frank received his teaching credential from UC Davis and can teach Industrial Arts and Technology (ITE), Agriculture, Agricultural Specialist, Industrial Metals, and Administration.

Mr. Frank regularly participates in professional development and has attended Autodesk University, Mastercam training for instructors, and has completed the introductory machine tool course provided by Sandvik-Coramont. Mr. Frank also conducts professional development for regional teachers. His topics have ranged from Mastercam to developing leadership skills. He also participates in a regional Strategic Linking of Academic and Technical Education (SLATE) group dedicated to providing relevance to mathematics for our students. SLATE is managed by the Institute for Evidence Based Change and funded by the James Irvine Foundation.