The Innovative Design and Engineering Academy (IDEA) is a technology-driven program with an engineering academic pathway.

IDEA students learn the fundamentals of both architectural and mechanical CADD, experience a hands-on engineering lab and create animated 3D (3-dimensional) models. Academy students also share the same core classes of English, Social Studies, Math and Science. This allows students to use their technology skills and knowledge towards mastering the standards in both these subjects. Students also complete projects that bridge these classes as well as their Career Technology class.

IDEA showed me real life situations on things that I will actually use in my future. Also, I love the staff of the academy & students & it feels like we are a family in our own aside from the whole of PGHS.”

E.S. (IDEA Academy student)

ACADEMY BENEFITS
• Preferential Registration.
• IDEA Senior Scholarship ($500)
• Competitions: FIRST Robotics, Solar Car Race, and more!
• Events: end-of-year-BBQ, PG Academy Week, Career Day.
• Field Trips: Kauer Guitars, Altec, Simpson Strong-Tie, SMUD.
• Industry Guest Speakers.
• Earn College Credits.
• College Application Notation.
• Earn community service hours.
• Awards and Graduation Honors.
• Job Internships. (past internships included Google, Facebook, SMUD, etc.)

FUTURE CAREER OPTIONS

High School Diploma
• Junior Drafter
• CAD Technician
• Construction Apprentice
• Engineering Aide
• Drafting Apprentice
• Apprentice Electrician
• Computer Equipment Installer
• Security Equipment Installer

AA, AS Degree or Certificate
• Drafter/Designer
• Plan Checker
• Surveyor
• Estimator
• Electrical Engineering Technician
• Mechanical Engineering Technician
• Laboratory Technician
• Civil Engineering Technician
• Chemical Engineering Technician
• Aerospace Engineering Technician
• Architectural Drafters
• Telecommunications Technician
• Journeyman Electrician

BS, BA or Post-Graduate Degree
• Mechanical Engineer
• Aerospace Engineer
• Agricultural Engineer
• Electrical Engineer
• Computer Hardware Engineer
• Telecommunications Engineer
• Landscape Architect
• Materials Engineer
• Nuclear Engineer
• Architect
• Industrial Designer
• Civil Engineer
• Structural Engineer

Learn more about IDEA.
Watch our YouTube video!

OUR BUSINESS PARTNERS
• Topcon Precision Agriculture
• SMUD
• Langil’s General Machine, Inc.
• Paton Group
• Rahus Institute
• Siemens
• North State Building Industry Association
• Sacramento Water District
• HP
• Ford NGL
• Western Electrical Contractors Association, Inc.
• Sacramento Valley Sheet Metal Workers
• Kauer Guitars
• NextEd
• Sacramento Employment Training Agency (SETA)
• SMUD Organization and Workforce Development
• American River College
• UC Berkeley
• Consumnes River College
• CSU Sacramento
• DeVry University
• Boys and Girls Club of Greater Sacramento
• Pinnacle Telecommunications, Inc.
Innovative Design and Engineering Academy (IDEA)
Industry Sector: Engineering and Architecture | Pathway: Architecture and Structural Engineering

SAMPLE CAREER-THEMED COURSES

*The sample program of study outlined below lists academy-specific courses and does not include the full list of graduation requirements in writing, math, VAPA, WL, etc. These courses are subject to change based upon industry trends. These courses are subject to change based upon industry trends.

9th Grade
- **Computer-Assisted Design/Drafting (CADD):** This course provides resources for an introductory course in design drafting with the use of AutoCAD and Inventor. The course reviews design principles with an emphasis on mechanical drafting, fundamentals in geometric construction, multi-view projections, basic dimensions and text and covers both 2D drawing and 3D solid modeling concepts.

10th Grade
- **Principles of Engineering A:** This course is designed for students to engage in various hands-on activities to explore the nature of assorted engineering fields. During this exploration, students will gain insight into the educational requirements of the engineering profession, required skills for most engineers and the roles and functions of engineers. **OR**
- **Principles of Mechatronics:** Students are introduced to the engineering process to solve technological problems and to selected software and hardware tools. In a hands-on environment, students solve assigned problems by creating solutions that require mechanical, electrical and/or software elements. Students must demonstrate their solutions are adequate through testing and demonstrations as well as through oral and written reports.

11th Grade
- **Design and Implementation:** This course emphasizes aesthetics and creativity, design, drafting, and project implementation. Project experiences in wood, metal and sculpture will be included.

12th Grade
- **Principles of Engineering B:** This course is designed to advance engineering design principles though the three dimensional mechanical and architectural drawings. Students will review and reinforce basic computer-assisted drafting techniques and theories and then produce a series of advanced drawings.

How to Apply
- Applications accepted online during January and February
- Students will be notified in March

Who Can Apply?
All students residing within the PGHS attendance area.

“...My favorite thing about the IDEA was that it taught me the skills to become not only a fantastic engineer, but a skilled craftsman who is dedicated to his work...”

C.N. (IDEA Academy student)

CONTACT INFORMATION

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Email: PGHSIDEA@egusd.net
Counselor: Dawn Grovhoug
Email: dgrovhou@egusd.net
Web: pghs.egusd.net
Web: www.EGUSDexplore.com

Academy VS. Non-Academy Data (District-Wide)

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<th>Attendance</th>
<th>A-G Completion</th>
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DUAL CREDIT

- Accelerated College Entrance agreement with California State University, Sacramento. Students receive college credit for the CSUS course ENGR 6 Engineering Graphics/CADD
- Students receive college credit for American River College Course: Design Technology 100 – Introduction to Computer Aided Drafting and Design

CERTIFICATES & ACTIVITIES

- Certified Solid Works Associate (CSWA)
- Eagle Force Robotics Club
- Resume Writing and Interview Help
- EGUSD Work-Ready Boot Camp
- LaunchPath
- Workplace Learning and Internship Opportunities