



# Manufacturing Production Technology Academy

LAGUNA CREEK HIGH SCHOOL

Manufacturing Production Technology Academy (MPTA) specializes in training students with hands-on mastery of virtually every aspect of modern-day production and manufacturing. Students will be prepared to enter college and/or careers in manufacturing, engineering and skilled trades.

Students will participate in a technologically advanced and specialized performance-based curriculum that will prepare them to successfully compete in tomorrow's technological society.

This is a Connect Ed: The California Center for College and Career Model Program and District-certified academy. This program offers articulated post-secondary credits from California State University, Sacramento.



## BENEFITS

- Use technologically-advanced manufacturing and production equipment
- Research, design, engineer and market product prototypes
- Perform annual personal and community projects

“ Being in MPTA has taught me many new skills that I can apply in the real world. This academy has changed my approach to projects and their complications for the better. Working in groups have improved my social skills and offered me many opportunities to creatively express myself in a life-like environment.”

Former MPTA student



## FUTURE CAREER OPTIONS

### High School Diploma

- Desktop Publishing
- Graphic Art Equipment Operator
- Special Effects Animator
- Web Designer
- Pre-Press Designer
- Machine Operator
- Maintenance Mechanic
- Assembler
- Installation Apprentice
- Bindery Workers
- Welder
- Cutter, Solder, Brazier
- Plastics Assembler
- Foundry Helper
- Furniture Finisher
- Upholsterer
- Painting, Coating and Decorating Worker

### AA, AS Degree or Certificate

- Commercial Photographer
- Production Manager
- Graphic Artist
- Journeyman
- Advertising Design
- Multimedia Digital Editor
- CNC Programmer
- Machine Technician
- Tooling Journeyman
- Industrial Electrician
- Cabinetmakers and Bench Carpenter
- Tool and Die Maker
- Power Plant Operator
- Fabric and Apparel Pattern Maker
- Certified Welder
- Boilermaker
- Foundry Core, Pattern Maker
- Composite Fabricator
- Rapid Prototyping
- 3D Printing

### BS, BA or Post-Graduate Degree

- Architect
- Publisher, Editor
- Production Developer
- Industrial Technology Instructor
- Network Engineer
- Publications Management
- Multimedia Author
- Manufacturing Engineer
- Mechanical Engineer
- Tooling Engineer
- Design Engineer
- Quality Control Inspector
- Pressurized Vessel Engineer
- Fabrication Designer

## COMMUNITY PARTNERS

- Lennar Homes
- Villara Building Systems
- L & S Framing
- Mark Thomas and Company
- Kauer Guitars
- Safeway
- PG&E
- CalTrans
- Sacramento County Sheriff
- Cosumnes River College
- Sacramento Fire Department
- Premier West Bank
- Lynne Rose Bridal
- United Cerebral Palsy
- Feist Cabinets
- Elk Grove Upholstery
- International Paper
- Klein Educational
- JCW Flooring
- Rayco Electric, Inc

## Manufacturing Production Technology Academy

Industry Sector: Manufacturing and Product Development | Pathway: Product Innovation and Design

Industry Sector: Engineering and Architecture | Pathway: Engineering Design

### SAMPLE CAREER-THEMED COURSES

<sup>1</sup> The sample programs 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.

<sup>2</sup> a-g/g elective credit

<sup>3</sup> a-g/f fine arts credit, fulfills EGUSD fine arts requirement

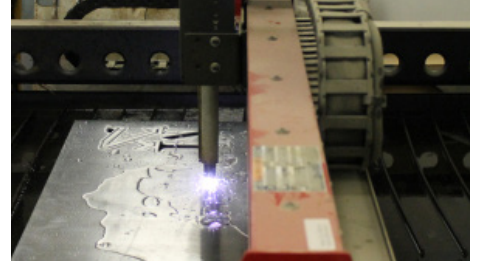
<sup>4</sup> Fulfills computer technology requirement. Fulfills senior math credit if taken senior year

<sup>5</sup> Students may attain ENGR6 course credit at CSUS

<sup>6</sup> Students may attain ME37 course credit at CSUS

<sup>7</sup> Students may attain ENGR7 course credit at CSUS. Fulfills senior math credit if taken senior year

<sup>8</sup> Fulfills the EGUSD speech requirement



#### Engineering Pathway

- |                   |  |
|-------------------|--|
| <b>9th Grade</b>  | • <b>Design &amp; Implementation<sup>2</sup>:</b> This course emphasizes aesthetics and creativity, design, drafting and project implementation.   |
| <b>10th Grade</b> | • <b>Principles of Engineering A<sup>3,5</sup>:</b> This course explores the design thinking process, Computer aided design, failure analysis and more.  |
| <b>11th Grade</b> | • <b>Principles of Engineering B<sup>5</sup>:</b> This course focuses on refining student skills from Principles of Engineering A.   |
| <b>12th Grade</b> | • <b>Advanced Engineering<sup>4</sup>:</b> This course emphasizes aesthetics and creativity, design, drafting, and project manufacturing. Students will use tools and machines safely and efficiently to manufacture parts and products. Assigned and individualized projects, along with course work on the history of design and manufacturing will be included. |

#### Engineering Design Pathway

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|-------------------|---|
| <b>9th Grade</b>  | • <b>Introduction to Engineering Design:</b> This course provides basic drafting tools, techniques and theories.  |
| <b>10th Grade</b> | • <b>Engineering Design A<sup>3,3</sup>:</b> This course is designed as the foundation for all other computer-aided drafting and design (CADD) courses. The focus is on developing computer-aided design/drafting skills for those with little or no CADD experience, using AutoCAD software. |
| <b>11th Grade</b> | • <b>Engineering Design B<sup>3,5</sup>:</b> This course builds upon the foundational skills learned in Engineering Design A.   |
| <b>12th Grade</b> | • <b>Engineering Design B<sup>3,5</sup>:</b> This course (if not taken during the 11th grade) builds upon the foundational skills learned in Engineering Design A.  |

#### How to Apply

To apply, complete the application on the MPTA website at:  
[www.lchs.egusd.net](http://www.lchs.egusd.net)

### CONTACT INFORMATION



#### Laguna Creek High School Manufacturing Production Technology Academy

Email: [LCHSMPTA@egusd.net](mailto:LCHSMPTA@egusd.net)

Web: [lchs.egusd.net](http://lchs.egusd.net)

Counselor: Ashley Koren

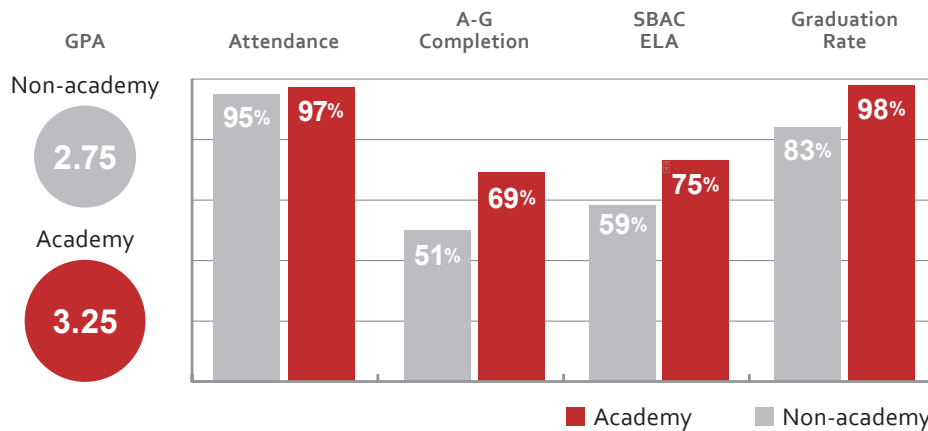
Coordinator: Rob Haworth

For general information about  
EGUSD's academies and pathways:

Phone: 916.686.7709

Web: [www.EGUSDexplore.com](http://www.EGUSDexplore.com)

### ACADEMY VS. NON-ACADEMY DATA (DISTRICT-WIDE)



#### DUAL CREDIT

- CADD (11th grade) A and B grades can earn 3 units from CSUS for course ENGR6
- Advanced CADD (12th grade) A and B grades can earn 3 units from CSUS for course ENGR7
- Design & Manufacturing 12 A and B grades can earn 3 units from CSUS for course ME37

#### IN THE COMMUNITY

MPTA Academy students use their skills by developing projects that benefit the LCHS campus, community, and programs for students that have special needs.



[www.EGUSDexplore.com](http://www.EGUSDexplore.com)