

Laguna Creek High School

Telephone Number: (916) 683-1339

<http://lchs.egusd.net>

Business Careers Pathway (BC)

From earning an industry-accepted certification in LAN management to understanding marketing concepts by managing and operating the campus store, students in the Business Careers (BC) Pathway have unique opportunities to become competitive in today's technological workplace and/or successful in pursuing advanced degrees. After being accepted in the four-year program, students choose one of three career strands to follow: Computer Technology, Business Management/Entrepreneurship or Accounting/Finance.

In the 9th and 10th grades, students enroll in introductory pathway classes. In the 11th and 12th grades, students focus on advanced coursework in their selected strand. Community partnerships, job shadowing and mentoring are career-related components of the pathway program. In addition, support is provided for students to complete the LCHS enrollment requirements for community service and senior project. The academy integrates the subjects of math, English, social studies and business education in a rigorous program that prepares students for college and/or the workforce.

The recommended sequence for this Pathway is:

| Course | Credits | Description |
|--|---------|--|
| BC General Business Course #12500 | 10 | This course introduces students to the entire field of business careers, the function of money (making it as well as spending it), checking accounts, budgets, credit and purchasing. The course is a good foundation for other business courses. Adopted curricular materials: No textbook assigned. |
| BC Computer Technology Course #12111 | 5 | This course focuses on computer technologies and their uses as applied to academic success. Students will learn keyboarding skills, word processing, computer operations, spreadsheets, database, library research technologies, and telecommunications. Students will be able to apply the skills learned in this course to complete assignments in other courses throughout their school career, by using the computer to conduct research, prepare papers, solve problems, and manage information. This course meets the Technology graduation requirement. Adopted curricular materials: <i>Century 21 Computer Applications & Keyboarding</i> , South Western |
| BC Business Finance Course #12010 | 5 | This course is designed for students to apply math skills to personal and business situations: keeping money records, figuring wage income, commissions, saving and investing money, figuring home and transportation expenses, taxes, sales records and more. Homework will be assigned on a regular basis. Students successfully completing this course will receive math credit toward graduation. This course meets the senior math graduation requirement. <i>Prerequisite(s): Algebra I.</i> Adopted curricular materials: <i>Applied Business Math</i> , South Western or <i>Mathematics of Money w/Algebra</i> , Glencoe |

LAGUNA CREEK HIGH SCHOOL
Green Energy Technology Academy (GETA)

The Green Energy Technology Academy (GETA) is a four-year program where students study and explore the technology of renewable energy. Upon graduation all students will be ready to enter in a post-graduate institution that further trains students for careers in the energy sector.

Each year GETA students explore green energy careers, compete in local energy related competitions, listen to speakers related to the current topic of study, participate in field trips, and develop the skills and character needed to work effectively in today's job market. Freshmen students are introduced to the science of energy. The sophomore year explores solar and wind energy. Juniors study biofuels and electric vehicle conversions, and GETA seniors, depending on their post graduate plans, will leave campus ready to work as interns with our partnering companies, conduct independent research with sponsoring organizations, and/or become certified in one of the many green energy certification programs available to them through local companies, junior colleges and four-year institutions.

Students enrolled in this academy must complete a sequence of Career Technical Education courses noted below as well as their core academic courses (e.g., English, mathematics, science, social science, etc.) as one cohort.

GETA Academy Programs of Study

Industry Sector: Engineering, Environment, & Utilities
Pathway: Energy & Environmental Technology

| Grade | Academic 1 | Academic 2 | Academic 3 | CTE | Advocacy |
|-------|------------|------------|-----------------|---|-------------|
| 9 | English 9 | Biology | World Geography | Introduction to Green Energy Technology | Advocacy 9 |
| 10 | English 10 | Physics | World Geography | Green Energy Technology I | Advocacy 10 |
| 11 | English 11 | Chemistry | World Geography | Green Energy Technology II | Advocacy 11 |
| 12 | English 12 | Statistics | | Green Energy Technology III | Advocacy 12 |

The CTE courses required for this academy are described below.

| Course | Class Restrictions | Credits | Description |
|---|--------------------|---------|--|
| GETA Green Energy Technology, Introduction to Course # 12750 | Freshman | 10 | This freshman level course surveys the technology of renewable energy and expectations in the work place. Topics include solar, wind, biofuels, hydrogen fuel cells, hydroelectric and geothermal sources of energy. Small modules such as solar cookers, solar race cars, small wind turbines, small scale methane production plants, water wheels/turbines, and hydrogen fuel cell race car kits will be used to explore these subjects. Students will also be exposed to career planning, responsibility and flexibility, ethics and legal responsibilities, and leadership and teamwork as they relate to the Energy and Utilities Industry Sector. Speakers from post-secondary institutions and industry partners will regularly present to students. <u>Adopted curricular materials:</u> <i>Renewable Energy: Power for a Sustainable Future</i> , Oxford University Press |

LAGUNA CREEK HIGH SCHOOL
Green Energy Technology Academy (GETA) (continued)

| Course | Class Restrictions | Credits | Description |
|---|--------------------|---------|--|
| GETA Green Energy Technology I <p style="text-align: right;">Course #12751</p> | Sophomore | 10 | <p>This course is designed to engage students in hands-on/project based learning to explore the technology associated with solar energy and wind power. During this exploration, students will gain insights into the educational requirements for work in the rapidly growing field of Renewable Energy. They will develop the skills needed in the design and construction of a solar case and wind turbine. These large scale projects will interface and charge a battery/inverter system. Using the engineering design process, students then take these systems and design, develop, model and test a solution to an energy related issue. Throughout the course students will listen to speakers from the companies who have partnered with the academy, take field trips to energy related facilities, and explore the careers available in the Renewable Energy Industry.</p> <p><i>Prerequisite(s): Successful completion of Introduction to Green Energy Technology.</i></p> <p>Adopted curricular materials: <i>Renewable Energy: Power for a Sustainable Future</i>, Oxford University Press</p> |
| GETA Green Energy Technology II <p style="text-align: right;">Course #12752</p> | Junior | 10 | <p>This course is designed to engage students in hands-on/project based learning to explore the technology associated with biofuels and alternative transportation. During this exploration, students will gain insights into the educational requirements for work in the rapidly growing field of Renewable Energy. Students will partner with mentors in the biofuel and alternative transportation fields of research, and work with these professionals to design and develop systems to create biofuels and modified electric vehicles. Using the engineering design process, students then take these products and design, develop, model and test a solution to an energy related issue. Throughout the course, students will listen to speakers from the companies who have partnered with the academy, take field trips to energy related facilities, and explore the careers available in the Renewable Energy Industry.</p> <p><i>Prerequisite(s): Successful completion of Intro to Green Energy Technology and Green Energy Technology I.</i></p> <p>Adopted curricular materials: <i>Renewable Energy: Power for a Sustainable Future</i>, Oxford University Press</p> |
| GETA Green Energy Technology III <p style="text-align: right;">Course #12753</p> | Senior | 10 | <p>This course is designed to place students into programs sponsored by academy partners. Internships, collaborative research and certification programs will be available through industry partners, union shop training programs, and post-secondary institutions. The research will be set in collaboration with institutions of higher learning and industries/corporations pursuing research and development. Internships will focus on job readiness, career planning and exposure to work in the energy and utilities job sector. Whether a student plans to attend a 2 or 4 year institution, enter into a career technical education training program or go immediately to work upon graduation, the senior GETA course will uniquely prepare each student for post-secondary success.</p> <p><i>Prerequisite(s): Successful completion of Intro to Green Energy Technology, Green Energy Technology I and Green Energy Technology II.</i></p> <p>Adopted curricular materials: <i>Renewable Energy: Power for a Sustainable Future</i>, Oxford University Press</p> |

**For a description of academic courses, see Section 1.
Please contact the school should you need further information.**

Manufacturing Production Technology Academy (MPTA)

The Manufacturing Production Technology Academy (MPTA) is an innovative educational program that combines the latest in manufacturing technology with direct, ongoing contact with industry and post-secondary institutions. Enrollment in the program creates a unique experience for all students interested in manufacturing, engineering and the Sacramento Regional High Tech Consortium-related occupations. The MPTA is designed to provide students with a combination of advanced, specialized curriculum, mentoring/shadowing and participation in manufacturing simulations.

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

Academy students actively solve manufacturing/engineering problems and develop product prototypes using advanced equipment articulated with industry and post-secondary institutions.

Students enrolled in this academy must complete a sequence of Career Technical Education courses noted below as well as their core academic courses (e.g., English, mathematics, science, social science, etc.) as one cohort.

MPTA Academy Programs of Study

Industry Sector: Manufacturing and Product Development
Pathway: Machined and Forming Technology

| Grade | Academic 1 | Academic 2 | Academic 3 | CTE | Advocacy |
|-------|------------|-----------------------------|-----------------|---|----------|
| 9 | English 9 | Math I | General Science | Exploring Tech 9 and Drafting 1A/B and MPTA Support 9 | Yes |
| 10 | English 10 | Math II | Biology | Exploring Tech 10 and MPTA Support 10 | Yes |
| 11 | English 11 | Math III (or Algebra II) | Physics | Design and Implementation | Yes |
| 12 | English 12 | | | Design and Manufacturing 12 | Yes |

The CTE courses required for this academy are described below.

LAGUNA CREEK HIGH SCHOOL

Manufacturing Production Technology Academy (MPTA) (continued)

| Course | Class Restrictions | Credits | Description |
|--|--------------------|---------|--|
| MPTA Exploring Technology Course #12350 | Freshman | 5 | <p>This course explores Computer Aided Drawing/Computer Aided Machining/Computer Aided Control milling and lathe machinery, aerodynamics, digital TV/Video production, small engine assembly, transportation, plastics, pneumatics, electronics, biotechnology, research and design, robotics, along with general hand tool usage and more. This MPTA course along with the action based project presentation (PowerPoint) will provide students an opportunity to examine many different modern technologies as well as careers associated with them. Students that receive a pass on the district's speech requirement scoring rubric will fulfill the district's speech requirement. Students must be concurrently enrolled in a MPTA math course, MPTA English 9, MPTA General Science, MPTA Drafting 1A and MPTA support 9 mini course.</p> <p><i>Prerequisite(s): Students must pass safety test within first 5 days of class. Students cannot enroll after 5th day of instruction. Students that do not pass safety test will be removed from course and MPTA program.</i></p> <p>Adopted curricular materials: <i>Technology Today & Tomorrow, Glencoe</i></p> |
| MPTA Woods 1/Support 9 Course #12103 | Freshman | 5 | <p>This course is designed to help MPTA students complete their 9th grade action based project. They learn how to create Power Point presentations and are given opportunities to practice their speaking skills. At the end of the course the students have completed a presentation on a manufacturing company that they present to an audience of parents, students and teachers. This course must be taken concurrently with MPTA Exploring Technology 9, MPTA math course, MPTA English 9, MPTA Physical/Earth Science and MPTA Drafting 1A.</p> <p>Adopted curricular materials: No textbook assigned.</p> |
| MPTA Drafting 1A/B Course #12101 | Freshman | 5 5 | <p>This course provides basic drafting tools, techniques and theories. Includes introduction to blueprint reading, basic drafting and machine drawing. Written assignments and basic drawing are required. Articulation agreement for college credit allows Advanced Placement agreement for college credit for students who complete both semesters of this course with a grade of "B" or better.</p> <p>Note: MPTA students enrolled in this course must concurrently take MPTA Exploring Technology 9/10, MPTA math course, MPTA English 9/10 and MPTA General Science/Biology.</p> <p>Adopted curricular materials: <i>Mechanical Drawing, Glencoe</i></p> |

LAGUNA CREEK HIGH SCHOOL

Manufacturing Production Technology Academy (MPTA) (continued)

| Course | Class Restrictions | Credits | Description |
|---|---|---------|---|
| <p>MPTA Exploring Technology</p> <p>Course #12350</p> | <p>MPTA students only Sophomore</p> | 5 | <p>This course focuses on refining student skills from MPTA Exploring Technology 9 in Computer Aided Drawing/Computer Aided Machining/Computer Aided Control milling and lathe machinery, aerodynamics, digital TV/Video production, small engine assembly, transportation, plastics, pneumatics, electronics, biotechnology, research and design, robotics, along with more advanced power hand tools and machinery. Integrated with MPTA English 10 students develop a business plan that leads to working with United Cerebral Palsy in designing and producing a prototype of a fine motor skill builder. Students are required to present (PowerPoint) their product on action base project night. This course will fulfill service learning requirements for MPTA 10th grade students. Students must be concurrently enrolled in a MPTA math course, MPTA English 10, MPTA Biology, MPTA Drafting 1B and MPTA support 10 mini course.</p> <p><i>Prerequisite(s): MPTA Exploring Technology 9 with a grade of C or better. Students must pass safety test within first 5 days of class. Students cannot enroll after 5th day of instruction. Students that do not pass safety test will be removed from course and MPTA program.</i></p> <p>Adopted curricular materials: <i>Technology Today & Tomorrow, Glencoe</i></p> |
| <p>MPTA Woods 2/Support 10</p> <p>Course #12104</p> | <p>Sophomore</p> | 5 | <p>This course is designed to help MPTA students complete their 10th grade action based project. Power Point presentation skills are reinforced and students are given opportunities to practice their speaking skills. At the end of the course they have completed a presentation demonstrating the product they have made in their Exploring Technology class. This course must be taken concurrently with MPTA Exploring Technology 10, MPTA math course, MPTA English 10, MPTA Biology and MPTA Drafting 1B.</p> <p>Adopted curricular materials: No textbook assigned.</p> |
| <p>MPTA Design and Implementation</p> <p>“a-g”/”f” approved</p> <p>Course #12320</p> | <p>Junior</p> | 10 | <p>This course emphasizes aesthetics and creativity, design, drafting, and project implementation. Project experiences in wood, metal, and sculpture will be included. Assigned and individualized projects along with course work on history of design and construction are also included. Tests will be given regularly and students will be expected to participate in projects and other assignments. Aesthetic judgment will be a part of the course. Credits may be used toward the Visual and Performing Arts graduation requirement. This course meets UC and CSU elective requirement and CSU and UC fine arts requirement. Note: MPTA students must be concurrently enrolled in a math course, English 11, U.S. History, Physics and CADD.</p> <p>Adopted curricular materials: No textbook assigned.</p> |
| <p>MPTA Design and Manufacturing</p> <p>Course #12330</p> | <p>Senior</p> | 10 | <p>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. Tests will be given regularly and students will be expected to participate in projects and other assignments. Students must pass a safety test in the first five days to remain enrolled. No new enrollment will be permitted after the first five days of instruction. Note: MPTA students are eligible to apply to CSUS through the ACE Program for transferable engineering credit.</p> <p>Adopted curricular materials: No textbook assigned.</p> |

LAGUNA CREEK HIGH SCHOOL
Sports Careers Academy (SCA) (continued)

SCA Academy Programs of Study

Industry Sector: Health Science and Medical Technology
Pathway: Therapeutic Services

| Grade | Academic 1 | Academic 2 | Academic 3 | CTE | Advocacy |
|-------|------------|-----------------|---------------|--------------------------|----------|
| 9 | English 9 | General Science | Health | Scholars 9 | Yes |
| 10 | English 10 | Biology | World History | Intro to Sports Careers | Yes |
| 11 | English 11 | Anatomy | US History | Intro to Sports Medicine | Yes |
| 12 | English 12 | US Government | Economics | Intro to Sports Therapy | Yes |

The CTE courses required for this academy are described below.

| Course | Class Restrictions | Credits | Description |
|--|--------------------|---------|--|
| SCA Scholars Course #7575 | Freshman | 10 | This course will help students adjust to high school, providing the structure, skills, and support necessary to succeed. This course will also help students develop the learning habits, ways of thinking, study skills, organization strategies, and planning exhibited by successful students at all levels. Adopted curricular materials: No textbook assigned. |
| SCA Sports Careers, Introduction to Course #12515 | Sophomore | 10 | This course is designed to give students an opportunity to explore the various careers available in the sports industry and to learn the workplace skills necessary to succeed in any career field, including goal-setting, leadership, problem-solving, and communication. Adopted curricular materials: No textbook assigned. |
| SCA Sports Medicine, Introduction to Course #12510 | Junior | 10 | This two-semester course will provide participants with skills in athletic training, physical therapy, and fitness instruction. Background information in basic anatomy and physiology, nutrition, ethical and legal issues involved in medicine, and medical terminology will be provided. Participants will also receive training in First Aid and CPR. Course content will include the care and prevention of athletic injuries, therapeutic treatments, and rehabilitation exercises. Students will learn the proper use of fitness equipment and will design appropriate exercise programs. Adopted curricular materials: <i>First Aid/CPR/AED for the Workplace</i> , The American National Red Cross |
| SCA Sports Therapy, Introduction to Course #12511 | Senior | 10 | This course is designed to engage students in advanced topics of Physical Therapy, Rehabilitation, Nutrition, Exercise Fitness, and Sport Performance. Students will study theories and perform therapeutic, exercise, and sport evaluation techniques. Students will design, evaluate, and execute a professional program based on the following fields of study: Physical Therapy, Rehabilitation, Weight Management, Personal Fitness, or Sport Performance. Participants will also receive training in First Aid and CPR. <i>Prerequisite(s): Enrollment in the Sports Careers Academy. A grade of C or better in Health A and B, Human Anatomy and Physiology, and 20 credits of physical education.</i> Adopted curricular materials: <i>Essentials of Exercise Physiology</i> , Lippincott |

**For a description of academic courses and the elective identified above, see Section 1.
Please contact the school should you need further information.**