School: **West Hills High School**

Academy/Pathway: **Engineering / Engineering Design (Aerospace Engineering)**

Grossmont Union High School District

Level	Grade	English Language Arts	Math	Social Studies	Science	Career Technical Education	Other Required Courses or Recommended Electives
Secondary	9	English 1, 2	Integrated Math I Integrated Math II	Geography	Biology Chemistry Physics	**Intro to Design 1, 2** **T708 / T709, UC-f AR***	P.E. Y1 WorldLanguage 1, 2 Visual and Performing Arts 1/2
	10	English 3, 4	Integrated Math II Integrated Math III	World History	Biology Chemistry Physics	**Intro to Design 1, 2** **T708 / T709, UC-f AR*** **Honors Principles of Engineering 1, 2** **T714 / T715, UC-d**	P.E. Y2 WorldLanguage 1, 2 World Language 3, 4 Visual and Performing Arts 1/2, 3/4
	11	English 5, 6 AP Literature	Integrated Math III Pre-Calculus Statistics Financial Literacy	U.S. History	*Science Elective*	**Honors Principles of Engineering 1, 2** **T714 / T715, UC-d** **Honors Aerospace Engineering (PLTW) 1, 2** **T722 / T723, UC-d**	WorldLanguage 1, 2 World Language 3, 4 Visual and Performing Arts 1/2, 3/4, 5/6
	12	ERWC AP Language	Pre-Calculus Calculus Statistics Financial Literacy	Am. Gov. / Econ. AP Psychology	*Science Elective*	**Honors Aerospace Engineering (PLTW) 1, 2** **T722 / T723, UC-d**	World Language 3, 4 World Language 5, 6 Visual and Performing Arts 1/2, 3/4, 5/6, 7/8
Key		**Minimum UC a-g Entrance Requirement**	**Required by GUHSD for Graduation**	**Recommended for College Admissions**	**CTE Concentrator Course**	**CTE Capstone Course**	**CTE Meets UC a-g Entrance Requirements** **Articulated Course**

The course sequence listed below is for illustration only. A student's actual course sequence may vary.

Additional Pathway Information

Occupations Requiring a less than a Baccalaureate Degree

- Civil Engineering Technician
- Electrical Engineering Technician
- Industrial Engineering Technician
- Mechanical Engineering Technician

Occupations Requiring a B.A. or B.S. Degree

- Aerospace Engineer
- Agricultural Engineer
- Architectural Engineer
- Biomedical Engineer
- CAD/CAM Engineer
- Chemical EngineerCivil Engineer
- Computer Engineer
- Electrical Engineer
- Environmental Engineer
- Geological Engineer
- Industrial Engineer
- Structural Engineer
- Systems Engineer
- Robotics Engineer

Recognized Certifications, Licenses, or Credentials Related to This Pathway

- OnShape Certification
- Employability Skills Certificates
- Fusion 360 Beginner Certificate through Solidprofessor

Post-Secondary	13	**CHEM 141** *General Chemistry I*	**ENGR 100** Introduction to Engineering and Design	**ENGR 120** *Engineering Computer Applications*	**ENGR 200** *Engineering Mechanics – Statics*	**ENGR 210** *Electric Circuits*	**ENGR 220** *Engineering Mechanics–Dynamics*	**Cuyamaca Community College Program Offerings:** ● Associate in Science in Engineering (plus General Ed.) in one of the following: ○ Civil Engineering (58 Units) ○ Electrical and Computer Engineering (53 Units) ○ **Aerospace and Mechanical Engineering (56 Units) (See Left)**
	14	**ENGR 260** *Engineering Materials*	**MATH 180** *Analytic Geometry and Calculus I*	**MATH 280** *Analytic Geometry and Calculus II*	**MATH 281** *Multivariable Calculus*	**MATH 285** *Differential Equations*	**PHYC 190** *Mechanics and Heat*	
		PHYC 200 *Electricity and Magnetism*	**PHYC 210** *Wave Motion and Modern Physics*					
		WBL Plan 25-26: ● Guest speakers: Aerospace Engineer (Northrup Grumman), Mechanical Engineer and Survivability Engineer (General Atomics), National Guard, Embry Riddle, NASA, Materials Engineer (Calaway Golf). ● PBL: Glider Project, Mars Rover Project, Rockets, Drones Project, Machine Operations Project, Hydrogen Fuel Cell Car Project, Automata Project, Mini-drone Programing, CAD Lego Project, Fling Machine ● Field Trips: Airshow, iFly, Air and Space Museum, SDSU Engineering Day ● Industry Tours: SDSU Engineering ● Internships/Apprenticeships: None ● Articulation of Introduction to Engineering Design with Grossmont Community College ● Job Shadow: Enviromine Drones in the field ● Simulated WBL: Machines Project (POE), and Mars Rover Project (Aero) ● Competitions: None ● Certifications: CareerSafe (2 certificates per year), Fusion: Beginner Certificate			**LMI Highlights for Pathway 25-26:** ● Growth %: 3% ● Average Earnings: $134,830 ● # of job openings: 4,400		