

School: **West Hills High School**

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



**Grossmont Union High School District**

L e v e l	G r a d e	English Language Arts	Math	Social Studies	Science	Career Technical Education	Other Required Courses or Recommended Electives	Additional Pathway Information
<b>S e c o n d a r y</b>	<b>9</b>	English 1, 2	Integrated Math I  Integrated Math II	Geography	Biology  Chemistry  Physics	Intro to Design 1, 2 T708 / T709, <b>UC-f</b> AR*	P.E. Y1 WorldLanguage 1, 2 Visual and Performing Arts 1/2	<p><b>Occupations Requiring a less than a Baccalaureate Degree</b></p> <ul style="list-style-type: none"> <li>• Civil Engineering Technician</li> <li>• Electrical Engineering Technician</li> <li>• Industrial Engineering Technician</li> <li>• Mechanical Engineering Technician</li> </ul> <p><b>Occupations Requiring a B.A. or B.S. Degree</b></p> <ul style="list-style-type: none"> <li>• Aerospace Engineer</li> <li>• Agricultural Engineer</li> <li>• Architectural Engineer</li> <li>• Biomedical Engineer</li> <li>• CAD/CAM Engineer</li> <li>• Chemical Engineer</li> <li>• Civil Engineer</li> <li>• Computer Engineer</li> <li>• Electrical Engineer</li> <li>• Environmental Engineer</li> <li>• Geological Engineer</li> <li>• Industrial Engineer</li> <li>• Structural Engineer</li> <li>• Systems Engineer</li> <li>• Robotics Engineer</li> </ul> <p><b>Recognized Certifications, Licenses, or Credentials Related to This Pathway</b></p> <ul style="list-style-type: none"> <li>• OnShape Certification</li> <li>• Employability Skills Certificates</li> <li>• Fusion 360 Beginner Certificate through Solidprofessor</li> </ul>
	<b>10</b>	English 3, 4	Integrated Math II  Integrated Math III	World History	Biology  Chemistry  Physics	Intro to Design 1, 2 T708 / T709, <b>UC-f</b> AR*  Honors Principles of Engineering 1, 2 T714 / T715, <b>UC-d</b>	P.E. Y2 WorldLanguage 1, 2 World Language 3, 4 Visual and Performing Arts 1/2, 3/4	
	<b>11</b>	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, <b>UC-d</b>  Honors Aerospace Engineering (PLTW) 1, 2 T722 / T723, <b>UC-d</b>	WorldLanguage 1, 2 World Language 3, 4 Visual and Performing Arts 1/2, 3/4, 5/6	
	<b>12</b>	ERWC  AP Language	Pre-Calculus  Calculus  Statistics  Financial Literacy	Am. Gov. / Econ.  AP Psychology	Science Elective	Honors Aerospace Engineering (PLTW) 1, 2 T722 / T723, <b>UC-d</b>	World Language 3, 4 World Language 5, 6 Visual and Performing Arts 1/2, 3/4, 5/6, 7/8	
<b>Key</b>	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.

<b>P o s t - S e c o n d a r y</b>	<b>13</b>	<b>CHEM 141</b> <i>General Chemistry I</i>	<b>ENGR 100</b> <i>Introduction to Engineering and Design</i>	<b>ENGR 120</b> <i>Engineering Computer Applications</i>	<b>ENGR 200</b> <i>Engineering Mechanics – Statics</i>	<b>ENGR 210</b> <i>Electric Circuits</i>	<b>ENGR 220</b> <i>Engineering Mechanics–Dynamics</i>	<b>Cuyamaca Community College Program Offerings:</b> <ul style="list-style-type: none"> <li>● Associate in Science in Engineering (plus General Ed.) in one of the following: <ul style="list-style-type: none"> <li>○ Civil Engineering (58 Units)</li> <li>○ Electrical and Computer Engineering (53 Units)</li> <li>○ <b>Aerospace and Mechanical Engineering (56 Units) (See Left)</b></li> </ul> </li> </ul>
	<b>14</b>	<b>ENGR 260</b> <i>Engineering Materials</i>	<b>MATH 180</b> <i>Analytic Geometry and Calculus I</i>	<b>MATH 280</b> <i>Analytic Geometry and Calculus II</i>	<b>MATH 281</b> <i>Multivariable Calculus</i>	<b>MATH 285</b> <i>Differential Equations</i>	<b>PHYC 190</b> <i>Mechanics and Heat</i>	
		<b>PHYC 200</b> <i>Electricity and Magnetism</i>	<b>PHYC 210</b> <i>Wave Motion and Modern Physics</i>					
		<b>WBL Plan 25-26:</b> <ul style="list-style-type: none"> <li>● Guest speakers: Aerospace Engineer (Northrup Grumman), Mechanical Engineer and Survivability Engineer (General Atomics), National Guard, Embry Riddle, NASA, Materials Engineer (Calaway Golf).</li> <li>● 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</li> <li>● Field Trips: Airshow, iFly, Air and Space Museum, SDSU Engineering Day</li> <li>● Industry Tours: SDSU Engineering</li> <li>● Internships/Apprenticeships: None</li> <li>● Articulation of Introduction to Engineering Design with Grossmont Community College</li> <li>● Job Shadow: Enviromine Drones in the field</li> <li>● Simulated WBL: Machines Project (POE), and Mars Rover Project (Aero)</li> <li>● Competitions: None</li> <li>● Certifications: CareerSafe (2 certificates per year), Fusion: Beginner Certificate</li> </ul>				<b>LMI Highlights for Pathway 25-26:</b> <ul style="list-style-type: none"> <li>● Growth %: 3%</li> <li>● Average Earnings: \$134,830</li> <li>● # of job openings: 4,400</li> </ul>		