CHLOE ANDRIEUX-AMADEI | chloeaamadei@gmail.com
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EDUCATION

Harvey Mudd College, Claremont, CA
Bachelor of Science in Engineering, GPA 3.48, Deans List — May 2028

RELEVANT COURSEWORK
Advanced Systems Engineering, Chemical & Thermal Processes, Experimental Engineering & Physics, Engineering Design & Manufacturing, Biomedical Engineering, Organic Chemistry, Engineering Mechanics, Computer Science, Probability and Statistics

EXPERIENCE

Student Engineering Consultant, Earthia Bio, Los Angeles, CA — August 2026 - Present
- Demonstrated strong deadline management whe3 n engineering an anaerobic digestion data collection device for biofuel plant efficiency, preparing comprehensive reports and clear knowledge transfer within a team of 8 and company liaison
- Engineered a 0.5 L, oxygen free, watertight Continuous Stirred Tank Reactor (CSTR) for tabletop-scale research applications

Lead Materials Engineering Research Assistant, Harvey Mudd College, Claremont, CA — January 2026 - Present
- Developed a computational model for testing low CO2 cement compound's hydration mechanics with different slab orientations and elemental substitutions, characterizing elastic constant matrix as a metric to track phase transition

Oncology Junior Medical Scholar, Ellison Medical Institute, Los Angeles, CA — June 2024 - July 2024
- Coordinated production workflows while sequencing proteins using advanced cell lab techniques to support cancer research
- Led collaborative discussion to identify relevant cancer therapies from patient symptoms, literature review, and lab data

Molecular Biology Student Research and Design Assistant, Windward School, Los Angeles, CA — September 2023 - May 2024
- Designed an SOP for multiplex PCR to differentiate invasive mosquito species to aid public health management techniques
- Applied structured problem solving methods to troubleshoot experimental variation and improve result consistency

Chemical Engineering Research Intern, University of Southern California, Viterbi, Los Angeles, CA — June 2022 - July 2022
- Applied advanced problem-solving techniques to optimize catalyst placements and streamline data analysis for hydrogen fuel cell reactions, optimizing workflow and resulting in minimized CO2 emissions and improved understanding of adsorption processes

PROJECTS

ePTFE Vascular Graft Mechanical Properties and Limitations — August 2026 - Present
Designed testing protocol to explore the material properties of ePTFE and its failure criterion
- Outlined machine operating protocol for Instron tensile tests to evaluate mechanical properties of ePTFE as a blood vessel grafts

Microelectrode Array Production System
Low-Cost Microelectrode Array Procedure Creation and Testing — October 2025 - May 2026
- Established a 13k lower cost pathway for creation of a microelectrode array to investigate extracellular electrophysiology
- Facilitated effective communication while managing project deadlines, budget, and coordination between team

Underwater Robot Construction for Data Collection — October 2025 - October 2025
Developed and tested an underwater robot to explore relationships between depth, pH, and turbidity
- Integrated reliability engineering principles into design of waterproof circuits and protoboard layouts, ensuring robust robot movement and seamless coordination of mechanical, digital, and electrical components

Vertical Garden Manufacture — September 2025 - December 2026
Manufactured vertical garden, CAD design, and respective engineering drawing
- Developed and implemented an efficient manufacturing process for vertical garden structure, integrating 3D CAD design and engineering drawings to ensure weatherproof construction and effective cost management within a team of four

SKILLS

SolidWorks (CAD) • MATLAB • Technical Drawing Analysis • CNC Machinery • Electronics Wiring • 3D Printing • Density Functional Theory • LabView • Machine Learning • Programming (Python, R, Java, Swift, Javascript, HTML, CSS, C)

LEADERSHIP

Experimental Engineering Course Proctor and Biology Teaching Assistant — August 2025 - Present
Elected Honor Board Representative at Harvey Mudd College — January 2025 - Present
Nominated for Pritzker Award in Molecular Engineering — December 2021