

Arjan Reyes

California Polytechnic State University at San Luis Obispo
Bachelor of Science in Aerospace Engineering, May 2028
Minor in Physics and Minor in Astronomy
[Engineering Experience/ Projects](#)

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Cal Poly Machine Shops | Shop Technician

Summer 2025 – Present

- Provide training in milling, turning, metalworking, composites fabrication, and welding, certifying 200 students to date.
- Advise peers on tooling, fixturing, and process selection while ensuring safe operation & best manufacturing practices.

Cal Poly Space Systems

Project Manager – Liquid Launch Vehicle

Summer 2025 - Present

- Lead a 25+ engineer team developing a pump-fed bipropellant launch vehicle using the Stratum engine, translating prior engine test results into flight vehicle design decisions.
- Oversee Ground Support Equipment, designing fluid system, con-ops, and procedures for filling N2O and GN2.
- Performed preliminary design of recovery, structures, and fluids—plumbing, pump integration, tank sizing.

Test Engineer – Barske Impeller Pump and NILE Test Stand

Fall 2024 – Present

- Conduct pump tests to evaluate the efficiency of different pump designs (first geared, currently Barske impeller) over a range of flow rates, yielding a pump curve used to optimize the design for the launch vehicle model.
- Completed 12 hot fire tests and numerous cold flows, including data collection, documentation, and thorough troubleshooting to evaluate performance of the 300 lbf engine and the 12-element unlike-doublet injector I designed.
- Following a hard start during 1,000 lbf engine testing, helped adapt the NILE stand for a smaller engine, revise procedures, and complete same-day cold flow and hot fire validation for the Paso Robles Spaceport test site.
- Responsible for leading design of new Barske E-Pumps for LNG, LOX, and LN2 as part of an ambitious new test stand.

Design Engineer – 500 lbf Self Printed Regeneratively Cooled Engine

Winter 2026 - Present

- Designed and developed solo, leveraging direct access to metal PBF for rapid iteration; performed full-cycle R&D including thermodynamic modeling (RPA), stress analysis (SolidWorks FEA), and design for additive manufacturing.

Cal Poly CubeSat Laboratory | Systems and Fluids Engineer

Fall 2025 – Present

- Maintain procedures, licensing, and requirements for a mission centered on experimentation with a deployable additively manufactured radiator with oscillating heat pipes.
- Designing a low thrust monopropellant thruster, focusing on load factor characterization test and fluid systems design.
- Advise and oversee manufacturing across the lab, leveraging shop technician position to maintain pace and deadlines.

Technical Skills

Test Operations: Hot fire and cold flow operations, high pressure fluid systems, data acquisition, procedures, troubleshooting, risk analysis

Engineering Software: SolidWorks, MATLAB, Python, OpenRocket, CEARUN, RPA, Netfabb

Manufacturing: Metal PBF (SLM125, EOSm290), WireEDM, Mill, Lathe, Weld, Composites

Research

Poly Electric Propulsion & Plasma Research

Fall 2025 - Present

- Founder/leader of an undergrad research group, coordinating 15+ peers to restore various dysfunctional thrusters, design a custom Hall-effect thruster, improve vacuum and DAQ facilities, and perform plasma diagnostic tests.
- Led the design of a sub-Kilowatt HET inspired by the SPT-70, performed scaling calculations, material compatibility checks, CAD for anode/propellant distributor, thruster manufacturing and electromagnet validation tests.
- Organized a hollow cathode test campaign to verify that it was not poisoned, starting with in atmosphere analysis before running the heater under vacuum and implementing the keeper to get plasma to strike.
- Created and presented lecture series to teach new members plasma physics and thruster design in a digestible form.

Additive Manufacturing Research Group

Spring 2025 - Present

- Operate and maintain procedures for both a SLM 125 and an EOS m290, have led over 10 successful print cycles.
- Designing a SS316L regeneratively cooled liquid rocket engine optimized for metal PBF fabrication, leveraging on-campus SLM access to enable rapid hardware iteration over traditional predictive-only design approaches.