

Lucas Pacheco is the Project Coordinator of the Hawthorne High-School of Manufacturing and Engineering. He currently manages and teaches in a Pre-Engineering program designed to engage 300 “at risk” high school students into post-secondary education or workforce options with emphasis in Manufacturing and Engineering. Using his industry background in manufacturing, he has helped create a work force development pipeline that facilitates partnerships between major industry partners and education with the goal of providing hands on experiences with working professionals as mentors. The school of Manufacturing and Engineering was an early adopter of Pre-Engineering curriculum and has become a model school for the State of California. The school has received National recognition since 2011 from the Society of Manufacturing Engineers and became 1 of 6 schools nationwide awarded the Society of Manufacturing Engineers PRIME Designation for Excellence in Manufacturing Education. Lucas is extensively trained in Manual/CNC Machining, 3D Modeling, Digital Fabrication and Prototyping, Sheet Metal Fabrication and Remote-Controlled Vehicles. He received his B.S. degree in Manufacturing Engineering Technology from California State University of Long Beach, attended teacher training/certification for Computer Integrated Manufacturing at the University of South Carolina, Engineering Product Design and Development at Oregon Institute of Technology.

During the last 20 years Lucas has helped create and maintain a student competition arm of the school to allow students to develop and hone their skills by competitively participating in an International High School Robotics Competition FIRST Robotics. These competitions ask the students, mentors and teachers to ideate, design, create and test a robotic machine in as little as six weeks then compete with this robot against teams from all over the world. This Engineering Team has 18 years of continuous awards that celebrates the manufacturing abilities of students and the school. Hawthorne High School prides itself on 100% in house; design, manufacturing, fabrication and testing by utilizing the skills of the students and a newly built 30,000 Sq Ft. Manufacturing and Engineering School, filled with CNC Machining Centers, Industry Standard Design Software, Additive Manufacturing Equipment, Fully equipped Fabrication Space, Garages and Work Yard. Currently Lucas and his engineering team is beta testing a new student competition adopted from the UK “Green Power Education Trust” designing building, testing and racing student built electric open wheeled racecars to bring a different aspect to the school that focuses on automotive racing. Using the model of a Race Team to teach and test the student’s skills and abilities on the racetrack.

Early on in Lucas’s life, exposure to back yard mechanics and desert enduros led to a passion for all things automotive. This became clear after completing many restorations and builds of cars for personal projects, ranging from vintage Volkswagens to Toyota FJ40, FJ43, and FJ45’s. In 2000 Lucas started using his manufacturing skills to reverse engineer and manufacture parts for vintage race cars under the guidance of Steve Ferron. Working on all types of chassis, Lucas has had the opportunity to learn a lost trade of hand fabricating and combining his training in 3D modeling and CNC Machining, to repair and replace parts that keep vintage cars alive. This unique line of work lead to working with HMSA as a tech scrutineer starting in 2002. During the past 17 years Lucas has traveled around North America measuring paddocks of racetracks, scrutinizing historic racecars, investigating on track incidents, monitoring impound, organizing staff and maintaining communications with Race Stewards.

