



CASE STUDY /

## Ansys + SJSU

“At SJSU, we make it a primary objective to provide students with simulation software experience, so they are competitive in the job market and prepared for their future careers. The Ansys Academic Multiphysics Campus-Wide Solution has made it easy for our faculty to implement simulation into course curriculums and projects. We are able to offer more than 10 courses utilizing Ansys software and graduate more than 250 students with simulation experience each year thanks to the easy access to Ansys tools.”

**Dr. Fred Barez**

Professor / Department of Mechanical and Aerospace Engineering at SJSU

# Simulation Experience Prepares Students for Careers Using an Ansys Academic Multiphysics Campus-Wide Solution

Engineering simulation experience is crucial for engineering students, so they are prepared for the real world. At San Jose State University (SJSU), we make it a top priority to equip our students with simulation software skills by incorporating simulation into our curriculum. Not only does this give our students a competitive advantage in the job market, but it also allows them to visualize the concepts they're being taught so they graduate with a deeper understanding of those concepts.

## / Challenges

With many different departments within the college of engineering at SJSU, it can be challenging to locate the specific software tools needed by professors and students. For example, if each engineering department managed their own Ansys licenses, you'd have to go from one department to another to locate and get access to the right tools. Since simulation is widely used for teaching and research at SJSU, this type of system would not be efficient for our engineering school and would make it far less convenient to incorporate simulation into our curriculum at the capacity we have.

## / Engineering Solution

At SJSU we have an Ansys Academic Multiphysics Campus-Wide Solution license. It is a single license that includes a wide range of products in multiple physics areas accessible across all of our engineering departments, which eliminates the hassle of having to manage individual licenses or locate specific licenses within the different departments. Our staff and students can access the same simulation tools across campus, making it much easier to utilize simulation for teaching, course projects, and research.

## / Benefits

In the engineering college at SJSU, one of our main objectives is to expose students to modern tools used in industry, especially simulation software. Having one Ansys license that spans all engineering departments makes it much easier for our staff to provide students with hands-on simulation experience that prepares them for their future careers. This allows us to focus on teaching versus accessibility. We offer more than 10 undergraduate and graduate-level courses that utilize simulation in some capacity, allowing us to graduate more than 250 students each year with Ansys experience.

## / Professor Background

Dr. Fred Barez is a professor at San Jose State University's College of Engineering in the Department of Mechanical and Aerospace Engineering. He teaches courses in dynamics, vibrations, control systems, electronic packaging high vacuum systems engineering and semiconductor manufacturing process and equipment. Professor Barez is also involved in ongoing research at the University's Energy Efficient and Smart Home Laboratory and the Hybrid and Electric Vehicle Laboratory.

## / Ansys Products Used:

- Ansys Academic Multiphysics Campus-Wide Solution

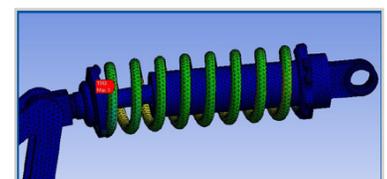
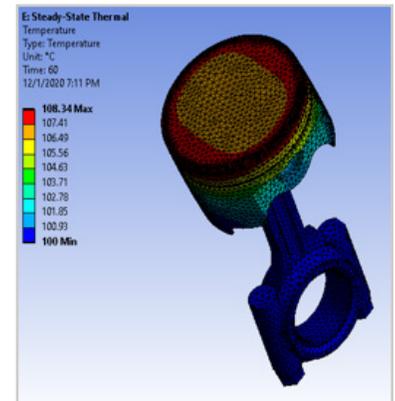


Figure 6. 11.2 m/s Max Stress

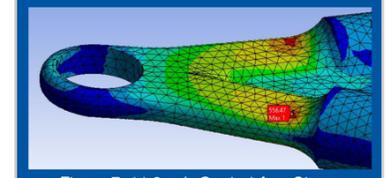


Figure 7. 11.2 m/s Control Arm Stress