“Those experiences helped me apply what I learned in the classroom and how to manage constraints,” he says.

“Because SAE was a volunteer extracurricular organization, only a handful of students had the time to work on these cars. I had to learn what their limitations were as well as budgets, and the stuff you have to deal with in real life in the real world.”

In his current role, Restrepo works on Stewart’s #14 team based in Kannapolis, N.C., to get the cars ready for the next race. On race days, he assists the engineers and the crew chief.

“You are not allowed to have sensors and data systems on actual race day cars,” he says. “What we do is rent out a track for a day or two and instrument the heck out of the car so we can tell how it’s behaving.”

Restrepo says the simulation software and the various test rigs provide the team with data that can improve the car’s speed and overall performance. He said the data gathered prior to a race in Phoenix helped the Stewart team make significant changes that led to a trip to Victory Lane earlier this year.

“You can have more data than you know what to do with. You can have bad data,” he says. “What separates you is how you analyze and use it, because data can help you win races. You don’t have to rely completely on the driver to know what the car is doing.”

Over the next several years, Restrepo hopes to become a primary race engineer with a NASCAR or endurance sports car team. He remains grateful to his family and his friends at USF who helped him make it to this point.

“My mom was always there to support me and push me along,” he says. “She would make sure I was studying and concentrating on my classes, because there were times when I would be working on and designing race cars instead of studying as much as I should. I also had a lot of friends within and outside SAE who kept me going and supported me through the hard times.”

After every race, his father calls from Colombia for a post mortem. “He’s very happy and very proud and excited about what I’m doing,” Restrepo says. “He’s always asking me about the cars and what I did to them and stuff like that.

“My mom is very proud, too, because this is why she left Colombia and came here,” he says. “She wanted to provide me and my sister with a better life, and give us a chance to follow our dreams. She fulfilled that dream of providing us with a better life.”