CSUN works to propel satellite into orbit

A group of engineering students and faculty hope to launch the CubeSat, a shoebox-sized dish packed with solar cells.

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Students and faculty are gathering to work on elevating CSUN’s engineering status about 200 miles up with the development of their new satellite.

The group of engineering students, supervised by faculty from the electrical and computer engineering department, is known as the CSUN CubeSat Project Team. They are working to launch a type of satellite, known as a CubeSat.

“It’s a very intelligent little box,” Professor James Flynn said during a team meeting on April 3.

The student team (back row, right to left) Professors Sharlene Katz, David Schwartz and James Flynn worked to create the CubeSat which was designed to orbit the world who track and communicate with satellites.

“The student satellite is only observable in your area for a little amount of time, but it helps if other people in different places are able to track it,” said Steven Parks, a student member.

The CubeSat project is available to universities across the country, and is an opportunity to test experiments out in space. The CSUN satellite is going to test alternative power techniques for satellites and spacecraft.

Our labor, of course, is for free,” joked Sharlene Katz, Professor of Electrical and Computer Engineering.

Typically, it would cost another $45,000 just to launch the satellite. But thanks to their sponsorship from the Jet Propulsion Laboratory (JPL) in Pasadena, the satellite will be hitching a ride with a shuttle in a few years.

“This is our fourth major sponsored project,” Professor David Schwartz said.

The project has received parts and funding from JPL, along with funding from Associated Students. They have also gotten parts from other laboratories.

Currently, the project is in phase one. The team is focusing on the design and testing of the CubeSat. This is estimated to take about a year to complete.

“There’s a lot of problems with the ground station right now, it’s old equipment,” said member Rufus Simon. “We’re fixing it! Step by step.”

The project will not only help the team track CSUN’s CubeSat, but other satellites as well. It will become part of the Global Educational Network for Satellite Operations (GENSO), which is a community of universities across the world who track and communicate with satellites.

“Sometimes the satellite is only observable in your area for a little amount of time, but it helps if other people in different places are able to track it,” said Steven Parks, a student member.

“We’re (the team) in the process of trying to see if this structure is right for experiments,” Park said.

“It has limitations because of its lack of space, but it can be developed quickly.”

The designs are being worked on by students and engineers from JPL. The experience provides a unique opportunity for them to network with professionals in their field, and looks good to future employers.

“They’re happy we’re getting our hands dirty with today’s technology,” member Andy Kurum said.

Phase two is set to start during the fall semester, and the team is hoping to complete the satellite by December 2014. Of course, the project doesn’t end with the CubeSat’s launch.

The team will be actively monitoring their experiment and tracking the position of the satellite. Follow-up experiments will depend on the condition of the CubeSat.