Juan Franco has had a hard time taking notes in class ever since he broke his right arm in a bicycle accident two weeks ago.

Forced to write with his left hand, the bioengineering junior said his doctor estimates his arm will heal in two months.

In a lecture hosted by the College of Engineering, Franco learned that researchers studying nanotechnology for medical uses may soon discover ways to help broken bones recover at a rate three times as fast.

"I always knew that speeding up the healing process was possible," Franco said. "But I didn't think nanotechnology would be the answer."

Sungho Jin, materials science professor at the University of California, explained the unique properties of nanomaterials and how one day they may solve some of the current and common issues facing the world.

"How helpful would it be for someone who breaks their leg to be able to walk in one month, instead of three?" He said. "How about helping a person with cancer live longer by developing more specific treatments?"
Nanomaterials allow for research in designing devices or tools small enough to be used for specific purposes, which lessens the possibility of hindering side effects.

Jin’s lecture was the fifth in a year-long speaker series hosted by the College of Engineering.

Jin, who spoke to an audience of about 60 members, said some of the biggest challenges facing young engineers are discovering ways to create a sustainable environment and finding ways to treat cancer.

Nanotechnology generally deals with devices measuring between 1 to 100 nanometers in at least one dimension that can’t be seen with the naked eye.

The ultimate goal of scientists is to find ways to improve quality of life, he said.

“The challenges of the century can be solved through nanotechnology,” Jin said.

Through some applications of nanotechnology in medicine, doctors may someday target cancer in patients and provide spot-specific treatment to cancerous cells.

“Technology is growing at such a rapid pace and changing constantly,” said alumna Alana Duncan. “When I was in school, I remember people ignoring nanotechnology, believing it was all science fiction.”

Duncan, who is a retired computer science engineer, said it’s impossible to know when the next new breakthrough will happen.

“Science is a tricky subject,” she said. “You never know when the next experiment will produce the results you were looking for.”