Every winter for the past four years, the University of Cincinnati’s Solar Power for Africa class has headed to Ethiopia to install technologies such as solar panels and lights.

The class’s instructor, Gregory Beaucage, professor of Materials Science and Engineering, has high hopes for this year’s trip. The team will not only be installing panels but will also be doing design work to help insure long term effects of their efforts. Many of these installations are done in schools or other communal locations.

The class is in partnership with Ethiopian universities such as Haramaya University near the city of Harar. The partnership makes this truly unique because Ethiopian students can “sit in” on the UC class via Skype during the lecture. This helps extend the knowledge across both cultures at the same time. “It’s an all-around learning experience,” said Beaucage.

The solar panels and computers are funded by donations from the Cincinnati Rotary Club, Club 17 in downtown Cincinnati. Their intent is to encourage ongoing efforts for student development projects. In the past four years, the Club has donated about $50,000 and will be contributing nearly $20,000 this year alone. These contributions paid for the installation of solar well at a primary school last year and funded solar power for a medical clinic at the same village the year before.

The primary purpose of this class is to help install solar panels. However, there are many secondary aspirations. The class is teaching Ethiopians to maintain what has been installed, understanding developing countries’ social, cultural and political climates and implementing what the UC students have learned in their own culture and college experiences.

Beaucage stressed that these projects are centered on giving back to a less developed country, and they are not trying to force any of these technologies on anyone. It’s more about giving them the opportunity to learn and utilize them if they choose. While it is important to install the technology and educate the local people on its operation, it is equally important to provide them with a means of obtaining parts and repairing the panels. Knowing this is crucial; Beaucage plans to be involved in the construction of a solar panel assembly plant at Dire Dawa University.

This year’s class will consist of nine students, eight of whom are engineering majors and one biology major. In past years there have been students from DAAP, business and photography as well as engineering who have contributed to the project.

Cody Ernst, Senior, is going on the trip this year. He is this year’s only Biology major. “I decided to take the class because I have always had the desire to help people and this class will give me the opportunity help some of the people who need it most”, said Ernst. He says having different approaches and opinions can only benefit the cause.

“I am really excited about the trip and I can’t wait to go over there and help the people.”

Ethiopia has one of the largest populations in Africa. This population lives off the land and has very little, but ironically many of them have cell phones. Without a ready source of electricity, they are unable to charge these phones as easily as we do. In some cases, they have to walk up to 20 miles round trip, just to charge their cell phones. Things we take for granted here, are not necessarily easily accessible in Ethiopia. This just one example of the need for alternative power sources in these villages. In order to accomplish their goals, UC works with the Ethiopian Embassy. They have been a good partner to work with in terms of picking optimal locations and dealing with government paperwork. According to Beaucage, Ethiopia is sunny all the time and near the equator so it’s one of the best places on earth for solar energy.
Beaucage said students who have been involved in past years have all gained something from this class. It opens up their view of the world and helps them find ways to interact with a developing country. A small handful of students have even been motivated enough by the experience that they established a non-profit. One even went to graduate school at Arizona State for solar technology. Beaucage said, "It surprised me how many people came back to tell me that this was a great class and real impact on me. All of the students are looking for a way to interact with the developing world. I think that’s true of everyone who has gone on the trip."
Students walking through a school in Ethiopia