

## DEPARTMENT II

Case students  
Christie Petryszyn,  
left, and Kristen  
Levy, in the  
Dominican  
Republic.



# ENGINEERS WITHOUT BORDERS: ACROSS DISCIPLINES, AROUND THE WORLD

Winter break. It's as much a part of the college experience as final exams or football games. Many students return to their hometowns for a welcomed respite from the campus grind. Others join their families or friends for annual vacations to the ski slopes or some distant sunny beach.

Then there's Daniel Zula. "I spent my winter break installing an electrical backup system for a medical clinic in the Dominican Republic," says the Case senior electrical engineering student.

And he wasn't alone. Nine Case students—all members of the Case chapter of Engineers Without Borders (EWB)—spent their break in the small town of Guaricano, an impoverished community on the outskirts of the Dominican Republic's capital of Santo Domingo. One group worked with Zula on the electrical system, while another group conducted testing on the groundwater that serves the clinic.

The students were joined by Robert Mullen, professor and chair of Case's

Department of Civil Engineering and an EWB adviser, and two volunteer electricians from Cleveland-based Spelman Electric. The trip was primarily funded by the Case Alumni Association.

The work may have been difficult, but the rewards far outweighed the sacrifices. According to Jacob Crandall, a junior mechanical engineering student who serves as the group's international projects coordinator, "It can sometimes be difficult to get students to commit so much time, but once they're involved



### CASEDRIVE

EWB's involvement in the Dominican Republic is the result of existing university ties forged by the Dominican Republic Initiative for Volunteer Experiences, or CaseDRIVE. CaseDRIVE is a collaborative effort across the university to provide service-learning opportunities for students in the country.

Last year, students and faculty members representing four schools and colleges worked on various projects in and around Santo Domingo. Nursing students helped deliver babies and care for the mothers at a maternity hospital in the heart of the city, social work students went on house calls with local social workers, and Spanish students assisted at a primary school and organized after-school activities. Students in medicine and dental medicine also have conducted previous volunteer efforts in the area.

For more information on CaseDRIVE, visit <http://home.cwru.edu/~mlt17/CaseDRIVEinfo.htm>. For more information on the Case chapter of Engineers Without Borders, visit <http://home.cwru.edu/ewb>.

and see the impact they can have, they can't wait to do more."

The group is a chapter of Engineers Without Borders USA, a non-profit organization established in 2000 to conduct engineering-related service projects in developing countries worldwide. The organization has 32 professional chapters and 100 university student chapters across the country.

Founded in 2003, the Case chapter has grown into a group of more than 60 students with a wide variety of academic backgrounds. In addition to engineering majors, the most recent group of students to the Dominican Republic included anthropology, chemistry, economics, and Spanish majors.

"Everyone can get involved, no matter what your major is," says Katherine Schaad, the current president of Case's EWB and a senior in civil engineering.

Schaad, one of the founding members of the Case chapter, and Mullen traveled to the Dominican Republic in the fall of 2004 searching for the group's first international project. They quickly identified the energy and water situations of Guaricano as problems that deserved their attention.

The Guaricano clinic contains an emergency room that serves the surrounding community. The emergency room has



Photos this page: Case students lend a helping hand in the Dominican Republic.


electricity, but the region lacks sufficient infrastructure to generate it for extended periods. When electricity went out, clinic personnel were either unable to properly perform emergency care or were forced to power the room with a diesel generator that costs about \$15 a day to run—more than the daily wage of a nurse.

In addition to installing a backup electrical system, Case students conducted tests on a nearby well, to determine why some skin and respiratory diseases seemed to be prevalent in the community. Financial constraints on the residents make purified water a rarity for anything besides drinking purposes.

The electrical backup system completed on the most recent trip finally gave the clinic a reliable source of power, while

planning and executing the projects gave the students a sense of the true power of the knowledge they are gaining back at Case.

"People sometimes come out of college without an understanding of the practical applications of what they are learning," Crandall admits. "Something like this really lets you put theory to the test and see what a difference it can make in reality."

EWB members do not just put their knowledge to work on the international level. The group also participates in a unique local outreach program that introduces Cleveland Municipal School students to engineering. "If you want to go out and make a difference in the world, sometimes you need to start in your own community," says Ryan Li, a sophomore biomedical engineering student who oversees the program. "It's especially important in an area like Cleveland, which has so many needs." 

### STEVE TOWNSEND

*Steve Townsend is director of communications for the Case School of Engineering.*

