Showing Students the World

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We are in a global economy, and students must be prepared to live and work globally. Growing numbers of companies have international offices or plants, as well as overseas suppliers and partners. In addition, more and more positions include international travel as part of the job. Employers are looking for candidates with international experience, so college graduates with study-abroad experience have a real advantage. Employers want students with stamps in their passports!

Academically, the Belgium Environmental Science and Engineering Study Abroad program at Texas A&M University (TAMU) was designed to introduce students to European methods for protecting natural resources. Specifically, the department of biological and agricultural engineering (BAEN) at TAMU takes students to the Katholieke Universiteit Leuven, in Belgium, to study water and water quality issues. The academic program highlights the similarities and differences between U.S. and European methods for protecting and conserving soil and water quality.

Equally important, the cultural part of the program allows students to experience European life. The program was designed to immerse students in different cultures and ways of thinking. While Texas is almost 23 times the size of Belgium, Belgium has three official languages (Flemish, French, and German) with three distinct cultures. In addition, Belgium is centrally located in Western Europe, with quick and easy train travel to The Netherlands, France, Germany, England, and Luxemburg. The Belgian Study Abroad program allows students time to explore these other countries. Traveling throughout the continent greatly expands the students' international experience.

Field trip to the Longchamps sinkhole near Liege, Belgium, demonstrated surface water/groundwater interactions. Jan Nyssen from the Universiteit Gent (front row on right) conducted the trip.

Multiple universities

A unique feature of the program is that students from other schools can participate by arranging for course credit through their home university. Since the Belgium Study Abroad program was developed specifically for BAEN students, it occurred to BAEN faculty members that the program should be open to students from similar departments at other universities. We began by working with the TAMU Study Abroad office to develop a mechanism to allow students from other schools to participate.

Enrolling students from other biological and agricultural engineering programs from across the country adds another dimension to the cultural exchange component of the program. As students from different universities live, learn, and travel together, they gain a greater understanding of their own country and its diverse cultures, as well as an introduction to European cultures.

In the summer 2012 program, five students from the department of biosystems engineering and soil science at the University of Tennessee joined 17 TAMU students on the program. One of the students from Tennessee reported that she learned more about Texas than she did about Belgium!

Program details

The program offers courses in environmental hydrology and waste treatment processes for junior and senior students. The five-week program consists of two 3-hour courses during the second summer session (July and August), so the students obtain six hours of engineering credit toward graduation. There are also two sections of each class: one for engineering students, and one for non-engineering students. The program includes four field trips and four seminar

speakers. The field trips are generally day trips to see European methods for addressing important issues in resource engineering, such as:

- Using manure to produce bioenergy.
- Treating agricultural wastewater with constructed wetlands.
- Collecting treating, and distributing groundwater and surface water.
- Protecting coastal areas from storm surges using retractable sea gates.
- Treating municipal wastewater.
- Composting municipal organic wastes.
- Measuring groundwater/surface water interactions.

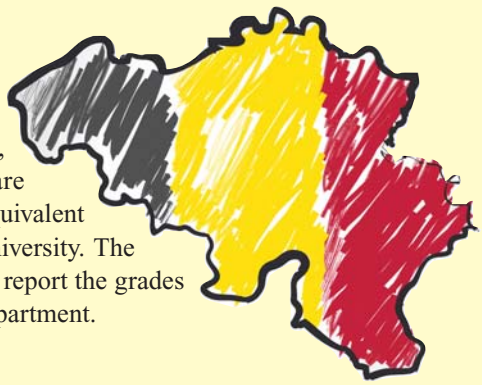
The seminar speakers are from EU and Flemish regulatory agencies and discuss EU methods for soil and water conservation. A typical week in the program consists of classes and seminars all day on Tuesday and Wednesday, and field trips on Thursday, with at least 15 hours of contact time each week. This leaves four-day weekends (Friday through Monday) for the students to travel.

Program participants stay in an international student house in Leuven with other students from around the world, which provides additional opportunities for cultural exchange. Kitchen facilities in the house allow the students to save money by cooking their own meals. All the students on the program rent bicycles and ride 15 minutes from the student house to the classroom building. Bicycles are an essential means of transportation in the Flemish part of Belgium, where K.U. Leuven is located. Flemish is the language of this region, but the vast majority of Belgians speak fluent English.

Rob Baldus (in water), Ashley Smith (middle), and Mara Arce (right), take streamflow measurements during a class laboratory in the Voer River in Leuven. ASABE member Eric Drumm (left), head of the department of biosystems engineering and soil science at the University of Tennessee, observed.

Program cost

The Belgium Study Abroad program fee is $2,500, which includes the costs for two TAMU faculty members, lodging, seminar speakers, field trips, bicycle rental, and registration at K.U. Leuven. Not included in the program fee are airline tickets, meals, weekend travel expenses, and tuition and fees for the classes. The students are responsible for making their own travel arrangements. They may choose to arrive in Europe before the program starts or stay longer after the program is over. However, all students are expected to meet at the Brussels airport on the first day of the program. To avoid paying out-of-state fees, non-TAMU students are allowed to sign up for equivalent classes at their home university. The TAMU faculty members report the grades to the student's home department.



Lessons learned

The Belgium Study Abroad program is now in its ninth year. In the eight years of the program so far, the most satisfying aspect has been observing the cultural development of the students. Many of the students had never been outside of the United States before. One student told me, "I had never been on a plane, on a train, or in a taxi, but today I did all three!"

The students arrive in Brussels jet-lagged and disoriented. Everything is new and different—language, money, food, transportation, and climate. However, they quickly transform into savvy international travelers. They learn to read train schedules, find food and lodging, travel to other countries, and still get back to Leuven in time for class. A key indicator of the students' international assimilation into European culture is the fact that we have never had to help a student find the Brussels airport on the way home. By the end of the program, all have acquired the confidence and ability to get themselves home without any assistance from the faculty members.

In this age of globalization, as employers are increasingly looking for candidates with international experience, students who have participated in study abroad programs—like ours—will definitely have an advantage.

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For more information on the Belgium Study Abroad program at Texas A&M, contact Clyde Munster or visit: https://studyabroad.tamu.edu/?go=Belgium). Recruiting begins in the fall, and applications are accepted until spring.

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