

## Haiti Seminar

*The Department of Civil Engineering and Geological Sciences*

**Spring Semester, 2005**

**Dr. Stephen E. Silliman**

This one-credit seminar involves student training, interaction with the Haitian population, and reflection. In Haiti, students will participate in teams who will repair hand pumps, the primary water supply in the majority of the rural regions in Haiti. The work will be centered in northern Haiti in the region around the town of Cap Haitien.

The seminar is limited to nine (9) Notre Dame students and is an experiential learning course that will take place during the spring semester. *It is anticipated that the trip will occur in March, during spring break. However, our contacts in country have indicated that an unacceptable level of political continues to be present in Haiti. Further, the U.S. State Department currently has a travel warning in place for Haiti. The University of Notre Dame will typically NOT allow undergraduates to travel to a foreign country for which there is a travel warning in place. Hence, we CANNOT guarantee that the travel to Haiti will actually occur – it will depend on news from Haiti at and before the time of our proposed travel.*

Preparation for the trip will involve a series of weekly training sessions. Each session will require approximately 2 hours of time. At present, we plan to hold these sessions in the evening, typically from 6 pm to 8 pm. These sessions will involve intensive training on hand pump repair, discussion of the mission of the trip to Haiti, and discussion of the social context of this work (within the overall context of the social, religious and political atmosphere in Haiti). There will be readings to be completed and discussed prior to the trip, a required journal to be maintained during the trip, and a final report to be submitted following the completion of the trip.

The primary learning objectives of the Haiti seminar are:

1. To expose students to the reality of infrastructure in the Third World and its impact on society, by introducing them to hand pump repair in Haiti.
2. To examine the technology needs (within a social context) for maintaining clean water supplies in rural, Third-World environments, with emphasis on appropriate technologies and local training.
3. To consider the interaction of the student's faith with their professional life as exemplified in this experience.

## Why Haiti?

Haiti is the poorest country in the western hemisphere. It shares the island of Hispanola with the Dominican Republic, but differs from the Dominican in a number of ways including cultural background and economic strength.

A country composed of people of African descent, Haiti was established when the slave population initiated a revolution in 1791. In 1804, Haiti was declared the world's first black republic. During the past 200 years, Haiti has survived a number of occupations and various forms of government. At present, the country borders on anarchy with the government imposed by the United States having little legitimacy and the supporters of President Aristide still quite active in the country.

The infant mortality rate is officially between 10 and 11%, but it is considered dramatically higher in rural regions. Disease and malnutrition take a number of tolls on the young population leading to high rates of death among children under the age of 5, stunted growth of the young, and failure to develop their full mental capabilities. Disease also cuts down on productivity in the population as a whole as people lose work days due to their own illnesses or the illnesses of their dependents.

One of the primary causes of disease in Haiti is poor quality water used for drinking, cooking, and cleaning. Further, the use of water from puddles, ponds and slow moving streams leads to high incidence of malaria, dengue fever, and other diseases associated with mosquitoes.

Plentiful, clean water supplies are available in the subsurface (groundwater). Further, a large number of wells have been drilled in Haiti to provide access to the groundwater. Unfortunately, many of the hand pumps used to produce water have failed (often for very minor reasons) and the locals have not been trained in how to repair these wells. As a result, people continue to rely on contaminated surface water for their water supply. Within this setting, a group of students from Notre Dame can provide clean water to those currently in need, can train locals in how to repair and maintain their wells, and can speak openly about how our religious views impact our personal behavior. Therefore, Haiti is an excellent location for pursuing this seminar experience.

## Living Conditions!

Working on hand pumps in Haiti represents a combination of two activities, each of which have inherent dangers to health. Living in Haiti involves exposure to new foods, to contaminated water, to people with substantially different hygiene practices, and to traffic on poor quality roads which will include cars and trucks with poor upkeep and driven by people without formal training in the rules of the road. While all water will be filtered / treated and food will be prepared according to our instructions, there is a finite risk of becoming ill while in Haiti and/or after returning from Haiti. Further, repair of hand pumps involves the use of tools and lifting weights up to approximately 100 pounds. While substantially less dangerous than drilling, repair of hand pumps does involve risk of injuries such as cuts and compression injuries to the fingers. As medical facilities within Haiti are limited, most

medical problems will be handled either by staff on the trip, by the nurses at the medical clinic at the local compound, or by returning the injured student to the United States for more advanced treatment.

The group will stay at a housing compound in Cap Haitien run by OMS International, LTD of Greenwood, Indiana. OMS has maintained the housing compound for a number of years and the compound is considered a safe place to stay. The compound has its own well water supply (which has been tested clean on a couple of occasions), is within a fenced perimeter, provides all food to be eaten on the trip (with the exception of one meal at a local restaurant), and maintains a car / van pool for our use in going to the field. We will likely fly to Haiti on Lynx Air which runs small (20 person) prop planes to Haiti and other islands in the Caribbean or on Missionary Flights International (a missionary group of pilots who fly DC-3's).

Haiti has become increasingly problematic from a political standpoint. The new government has yet to prove that it can legitimately rule and there remains strong support for the deposed president, Jean-Bertrand Aristide. In fact, the previous two student trips to Haiti (March and October of 2004) were cancelled due to fears over political violence and the OMS compound was briefly abandoned last March when Aristide was being ousted by the new government. While we have never had significant difficulty associated with political unrest during our prior trips, we are in regular contact with OMS and have, in the past, cancelled trips due to concerns over current political conditions. There is a reasonable chance that such need for cancellation will occur once again in 2005.

### Costs

At present, the University, the Veldman Family, and the Paul Rupp, Jr., fund have provided substantial support of this seminar. It is therefore anticipated that essentially all travel and living costs will be covered by University funds. As a result, it is anticipated that student costs will be limited to incidental purchases.

### Application and Registration

Applications for the course must be turned in either via email (silliman.1@nd.edu) or by regular campus mail to Dr. Stephen E. Silliman, Department of Civil Engineering and Geological Sciences, 156 Fitzpatrick Hall of Engineering (Use the mailbox in the office of Civil Engineering), by 5:00 pm on Monday, December 6, 2004. When you apply, you are agreeing to participate in orientation / planning meetings, training sessions, etc. The success of the program depends on student initiative and involvement.

Following our review of applications, there may be formal interviews held with the top candidates for this seminar. Both primary participants and alternates will be identified through the application / interview process. Those who are accepted into the seminar will be registered for one unit credit, probably in CE498.

### Academic responsibilities

1. Attendance at course meetings and preparatory sessions
2. Commitment to all group activities in Haiti
3. Final paper (4-7 pages)
4. Participation in follow-up sessions and evaluation upon return
5. Commitment to share with others upon return (through presentations, etc.) and helping, as possible, to plan the next seminar.
6. Journal of reflections on the field work and experiential components of the course as a basis for writing analysis papers which link with personal experience.

APPLICATION FOR HAITI SEMINAR:

**Submit prior to 5:00 pm on Monday, December 6, 2004.**

**Dr. Stephen Silliman  
Civil Engineering and Geological Science  
156 Fitzpatrick Hall  
silliman.1@nd.edu**

Your Name: \_\_\_\_\_

Student ID: \_\_\_\_\_

Class (Circle or Highlight One): Freshman, Sophomore, Junior, Senior, Graduate

Address at Notre Dame:

\_\_\_\_\_  
\_\_\_\_\_

Phone Number at Notre Dame:

\_\_\_\_\_

Email address: \_\_\_\_\_

Permanent Address / Phone:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

College {AL, ARCH, BA, EG, SC, FY, GR}: \_\_\_\_\_ Major: \_\_\_\_\_

Date of Birth and Age: \_\_\_\_\_

Do you have health insurance? (University regulations require all seminar participants to carry health insurance): Y N

Name of Health Provider and Policy Number: \_\_\_\_\_

Do you have a current passport with an expiration date no earlier than December 2005?

Yes No

(If you answered "No" to this question, are you willing to start the process of obtaining a passport IMMEDIATELY upon being accepted into the seminar?)

Can you attend all course meetings (assuming 2 evening hours, one day per week)?

Yes

No

Complete short (3-4 sentences or less) essays for each of the following:

1. What service, social awareness, and/or experiential learning courses and/or experiences have you participated in at Notre Dame or your home community?

2. Have you had any cross-cultural experiences? Any experiences in relation to poverty? If so, please explain.

3. Do you have any experience in a job requiring lifting of 50 pounds or more on a regular basis or working with tools (e.g. pipe wrenches, vice grips, crescent wrenches, etc)?

4. Do you have any experience living in an environment lacking regular electricity and/or clean water?

5. Do you have any experience working in a team setting under physically and/or socially stressful conditions?

6. Why do you want to participate in the seminar on Haiti? What are your hopes, aspirations, fears, and concerns?

7. What foreign languages do you speak (and at what level)?

8. Do you have any questions / suggestions that you wish to be addressed in the preparatory sessions?

9. If Haiti becomes politically unstable, would you be interested in traveling to Benin, west Africa, with a smaller group of students?