AC 2009-1544: GRAD STUDENTS JUST WANNA HAVE FUN: GREAT SOCIABILITY MAKES A GREAT GRADUATE PROGRAM

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Grad Students Just Wanna Have Fun:
Great Sociability Makes a Great Graduate Program

Abstract

The Ferguson Structural Engineering Laboratory at the University of Texas at Austin combines unique research and social aspects of graduate work for structural engineering students. The result is an education and experience that aids in the development of students who surpass their peers from other universities, as evidenced by consistently high rankings of the graduate program. In research, the students are responsible for producing top-quality results in an extensively equipped, hands-on laboratory. Socially, the lab employees, graduate researchers, and faculty gather for barbeques, softball games, intramural sports teams, golf tournaments, potlucks, and football tailgates. Lessons learned in class are reinforced when students help others who are falling behind, and when homework becomes a collaborative effort that is encouraged by providing plenty of space to work as a team. The result is an atmosphere of camaraderie that encourages teamwork, networking, and fun rather than cut-throat competition. This atmosphere helps with recruiting the best new graduate students and also assists graduating students to land jobs with their top choice employers. This paper describes the elements that make up this successful social environment in hopes that other programs will be able to adapt some of these ideas to suit their situations.

Introduction

Within any professional community, certain schools maintain a reputation well above their peers. In the structural engineering culture, the University of Texas at Austin (UT-Austin) is one of these schools, joining only a handful of others as producers of the most top-level research – and also the most top-level students. The same way the name "Harvard" carries a lot of weight on an MBA's resume, a degree from UT-Austin, especially when accompanied by a research position at the Ferguson Structural Engineering Laboratory (FSEL), says a lot about the caliber of student.

School Recognition

Don't just take our word on it, however; let's consider the facts. In the past decade, US News & World Report has consistently ranked the civil engineering graduate program third or fourth in the country, joining the likes of Stanford, MIT, and Berkeley. While ranking systems are not a perfect way to assess the quality of a program, especially in a department such as civil engineering where many disciplines all factor into one score, they are used by schools for recruiting and fundraising, and by students when considering where to continue their studies.

Now, let's consider the kind of graduate the FSEL program is putting into the working world. Within the Texas Department of Transportation, a UT-Austin graduate has held the position of State Bridge Engineer for over forty years. Outside the state, other graduates now fill tenured faculty positions and department chairs at top universities, including Stanford, Virginia Tech, and Purdue. Recent graduates, interviewing at top structural engineering firms, are often welcomed by multiple recent (or not-so-recent) graduates of the program.

It could, of course, be argued that the university recruits excellent students and those same students would go far, regardless of their graduate-level educational atmosphere. These students, however, are likely recruited by all the top graduate schools in structural engineering, including University of Illinois Urbana-Champlain, MIT, and Berkeley. We are arguing the belief that these students choose to come to UT-Austin because of the unique communal atmosphere that cannot be found at many other schools, and that helps develop the students further than other programs might. The following sections describe the work and social atmospheres referenced, detailing certain aspects that are, from a student's perspective, crucial to the unique nature of this program.

Working Together

At FSEL, working with your fellow students is not just a suggestion. The lab is set up to encourage multiple arenas for collaboration between students, including group research projects, shared resources, and copious amounts of communal space.

Common Entering Curriculum

Three courses are the recommended load for a MS student's first semester at UT-Austin. Students are encouraged to take two of the three classes that are required for their degree in that first semester (five additional electives and a completed thesis are also needed to graduate from the program). As most students follow this recommendation, the classes are filled with students all in their first semester at the university. Collaborating on homework, class projects, and exam review facilitates the development of friendships and working relationships. While these same students would likely make friends with other new or returning students in alternate classes, the experience of "getting through" your first semester with your peers makes for deep bonds.

Communal Desk Space

Upon joining a research project at FSEL, a new student is assigned a desk looking out over the lab floor. For new masters' students, the desk is located in a "bullpen" style (or cubical-farm, if you'd rather) room – a large room divided into five short isles with two to four desks per aisle. This personal space is highly beneficial to a new student: not only does it provide an out-of-home location to work on schoolwork, but the student is surrounded by his or her peers, who are also newcomers to the program.

A small conference room is also available to the students, which aids in teamwork for group projects. The room isn't very fancy, but has enough space for five or six students to come together and talk, with a white-board for writing up ideas. A printer, basic office tools, and university-owned computer are also available. For more computing-intense work, a computer lab is also available and is unlocked to students twenty-four hours a day, seven days a week. The computers are frequently replaced, loaded with the newest versions of important engineering software, and maintained by a member of the engineering college's information technologies staff two days a week.

Shared Research Space

In the lab, it is joked that "communism is still alive and well" – all lab facilities and general lab employees are available to all students on all projects. The lab technicians do not log their time on a specific project; if they are not otherwise occupied, they are available to help by operating the crane, demonstrating how equipment such as the universal testing machine is (safely) operated, or coming up with an easily-fabricated data-gathering set-up. While major supplies (such as 12 in.-thick steel plates) are purchased and charged to a specific project, "general lab" items (e.g., hard hats, rebar ties, and hammers) are more often paid with an aptly-named general lab account. There is no restriction on who can use the copier or the largest test frame in the lab (assuming the tool is not already in use, of course!).

By sharing resources, space, and experiences, students become interested in the work of their peers. Thus, when one student's project needs five or six students for a concrete cast or for running a test, it is never difficult to find volunteers. As well, when visitors come to the lab, almost any student can give a detailed tour, with details of each project on the lab floor. The student benefits from the additional knowledge that their peer is discovering, and visitors benefit from the thorough summary of current activities.

Figure 1: Students working together to cast a large concrete specimen

These may seem like minor comments on the social and work structure of this lab, but the results are extraordinary. A communal working attitude spills over into friendships, extra-curricular activities, and a sense of school pride that we believe to be infrequently matched by students from other universities.

Playing Together

Social events sponsored by the structures area constitute the backbone of the social culture in our program. Through these events the graduate students get to know the faculty, alumni, and each other. It is through the latter that additional social events, which fill out the FSEL culture, are made possible.

Welcome Barbecue

At the start of each fall semester, FSEL hosts a barbecue to introduce the new graduate students. The event, which is held in the lab parking lot, starts off with a social hour before supper. Drinks – alcoholic and otherwise – are provided by the lab. The social hour allows time to informally visit with peers, advisors, and potential future employers before sitting down to dinner. As people are finishing eating, the formal program begins. This program is hosted by the current lab director, who hands out a variety of awards from the preceding year. These awards are a combination of silly and serious. The silly ones vary with the antics in the lab each year. Past awards have included a "wrench award" (for a student who amazedly reported that when you move your hand to the end of the wrench, thereby increasing the moment arm, it's a lot easier to loosen bolts), a "Gumby award" (for the builders of some particularly flexible concrete formwork), and a "Martha Stewart award" (for the student who hung curtains in the windows of his shared office).

On a more serious side, the lab technicians award a plaque to the student who they feel worked the hardest, and the faculty recognize the most outstanding thesis from the previous year. The formal program concludes with all of the new students lining up at the front and introducing themselves. As engineers are not known as the most gregarious public speakers, the students are asked to give a certain list of information: name, undergraduate university, hometown, and some interesting tidbit. With the conclusion of the evening's program, one of the returning students issues a challenge to the new students of a flag football game to be held later in the semester.

Flag Football Game

A tradition at FSEL for over twenty-five years, the first years versus returning students football game has accrued an amazing undefeated streak for the returning students. This winning streak is likely as much a result of the faculty referees as athletic talent on the part of the students. The game takes place on the research campus on a field adjacent to the materials lab, with aggregate piles serving as bleachers. In the past three years a local structural engineering firm has sponsored a barbecue dinner on the sidelines to wrap up the game.

Figure 2: Flag Football, then (1984) and now (2007)

Recruitment Weekend

The structures area at UT-Austin has one very unique aspect to its recruitment weekend: visiting students are hosted by current students. This level of contact far exceeds the typical graduate student panel for making current students available to answer questions. By having current

students shepherd and chauffeur the visiting students, the visiting students get a better idea of what the city and university can offer including places to eat and things to do. The typical recruitment weekend schedule involves visiting students flying in on Thursday night, with hosting students picking them up and taking them to dinner. On Friday, the visiting students spend a full day on campus learning about the graduate program through faculty presentations and panel discussions. After a dinner involving host students, visiting students, and faculty, the host students take the visiting students out to see the night life in Austin. Saturday morning brings brunch with faculty and then the afternoon for the host students to show off the city. In the late afternoon, the host students bring the visiting students to the lab, where the visiting students go on lab tours and the keg is tapped. After the tour is a BBQ in the lab with all current students, faculty and staff invited to meet and greet the visiting students. The visiting students generally fly home on Sunday morning. The recruiting weekend also means that when new students move to the area, they already have met some people in the area. Hosts have helped gather information on apartments and recommend places to live.

Holiday Potluck

Everyone likes a holiday party and what better way to show off your home region's or country's food specialty than a potluck? The lab supplies the meat, drinks, and paper products, and the students, staff and faculty bring in side dishes and desserts. It is a fun way to gather at lunch to socialize and chat about upcoming research and exams.

Golf Tournament

The day after the last day of spring exams is the date for the J. Neils Thompson Annual Golf Tournament. Students are strongly encouraged to attend and make up the majority of the participants. Owning golf clubs or having ever played the game before are un-important elements. The lab owns several sets of clubs purchased at yard sales over the years that are available for students to borrow. As well, the tournament is played scramble-style, with the foursomes playing as a team, always using the best ball. Foursomes with little or no golf experience get additional "wedges" to speed them along. These specialty clubs involve the foot

wedge, arm wedge, and rope wedge (yes, we get to kick, throw, and change the ball's location by the length of the rope.) The tournament is all in good fun, with prizes going to the best and worst team as well as a few door prizes, all presented over a BBQ dinner that wraps up the tournament. Industry sponsors purchase holes (and have their names posted at the tee box) to help pay for the event. Typically the sponsors send a representative or two to play in the tournament, and are sprinkled throughout the student teams to encourage interaction between current industry members and the students.

Spring Softball Game and Cookout

The date of the spring softball game varies, but it is typically after the spring semester has ended, and sometimes as late as Memorial Day. The softball game has often seen a rematch of first year students and the veteran students, although without the predictable winner of the football game. Other years the students have played the faculty and staff. Regardless of the makeup of the teams, some play, some heckle from the sidelines, and all have fun. The lab provides the beverages, burgers, and hotdogs, but the sides and desserts are potluck. Families are invited as well, so this event serves as an opportunity to get to know spouses, children, and the occasional family dog.

Student Sponsored Events

Figure 3: Intramural soccer team, the Shear Studs, after winning their championship game

Through a combination of the many social activities that the program plans and that most first year graduate students are in the same classes, the students get to know each other quickly. Several student sponsored events have become traditions within the program as well. For instance, the structures area students host a tailgate before each home football game (BYOM – we cannot afford to buy each other meat!). Intramural sports are a perennial favorite,

although the sport(s) played vary with the current class of students. Some years have seen the students forming flag football teams, basketball, and softball teams. The present favorite sports are soccer and basketball, with the former having won multiple Co-Ed A level championships. Regardless of the sport, playing together, or even just cheering on your classmates forms a bond that carries over to research and schoolwork.

Ideas to Take with You

While we feel that our program is a great experience, the purpose of sharing what we have enjoyed about it is to provide ideas to others for improving the graduate student experience at their universities. Therefore, in an effort to better serve you, our fellow academics, we finish with some suggestions for how to get started:

- Begin the social activities early. It is especially important for new students to get to meet other students early on in their first semester.
- Establish some traditions! By repeating the same activities, planning is easier and students through the years have something in common, which can become an easy ice-breaker with an alumni who might be interviewing the student later down the road.
- Provide the students with meeting space to facilitate collaboration.
- Avoid differentiation between projects or students in your lab space.
- Create a communal email list for incoming students. This can aid in coordinating living arrangements with other incoming students as well as getting general questions answered. Recruit a returning student or two to be on the list to answer questions.

To get your group feeling social, start simple! Here are some ideas that require little expenditure and a relatively small amount of planning/organization:

- Ice cream party – just buy ice cream, chocolate syrup, bowls and spoons. The hungry mouths will do the rest.
- Potluck lunch – by providing the "big ticket" items, the meal is complete without a student buying and cooking a turkey.
- Flag football/soccer game – finding a field, ball, and picking up some mesh jerseys from intramural sports is all this activity needs (well, that and a few competitive students to create team pride).

- Trip to a baseball game or other local activity – most students can afford $5 for an afternoon out, and are even happy to carpool. All they need is an organizer. Alternatively, if your program is willing to spend some money, it can treat the students to the game.