Another semester, another edition of the MEMorandum. For many of us, we’re at the end of our time here at Duke, and it’s only natural to get all wistful about our time here at Duke. While it’s natural to feel some trepidation at leaving the university and entering the proverbial real world, it is important to look back and realize everything we’ve accomplished in the last semester. Our program had representation in six teams at the Duke Startup Challenge, including the winners and runners-up. A startup begun by students in our program has obtained a place in the shiny new DUHatch business incubator. We’ve also had a whole slew of social events: Holi, the Spring Formal, The MEM Olympics, and the first ever Mixer with Fuqua, the Law School, and the Medical School. The second ever MEM Yearbook was published this semester as well.

Earlier this semester, Noel, Ali and Arjun met with President Brodhead. He was very well acquainted with the program and mentioned the positive response he gets every time he talks about the unique multi-disciplinary education that this program entails. He said that the MEM is a great model going forward for implementation in other departments. Our successes as a collective can only bolster that sheen.

We’ve got a great lineup of articles for you in this edition.

On page 2, Dr. Fox talks about Distance Learning in the MEM Program

On page 4, Dr. Glass shares his thoughts and insights with us in our last MEM People.

On page 8 Moline Prak talks to us about her Duke Experience

On page 10, the mysterious Dr. L.A answers life’s conundrums.

On page 13, Ronak Patel describes his utter failure when it comes to giving hugs!

It’s been great getting to know you guys!

Truly,

MEMPDC Communications
Many of our students have participated in one of our distance learning pilots during the past year. I thought it would be valuable to summarize our experience and to provide an update regarding our plans. We have had 29 distance students participate in 4 different distance learning classes: Finance and Accounting, Project Management, Quantitative Finance, and Management. Distance learning classes have been held in our new 50 person classroom that is equipped with Mediasite (a lecture streaming and capture technology) and microphones above the student seats. Mediasite allows students to view the class live or to review the class at a later time. We use the existing Blackboard system for discussion boards and chats to ensure the distance learners are engaged. Each instructor has integrated distance learning a little differently and we are using these pilot courses to improve the distance student experience while maintaining the experience for our residential students.

Overall, the pilot classes have been a great success and the student feedback has been positive. Marc Sperber, Pratt’s Multimedia and User Services Specialist, deserves much of the credit. He was instrumental in setting up the distance learning technology so that it was ready for the start of classes in August. He has also continuously modified the system to improve performance and functionality. Some of these improvements include: microphone optimization to better capture student comments, installation of a conference line in the classroom for live presentations, and
making the Mediasite files more user friendly and downloadable.

This is not to say that there have not been challenges. For example, my Project Management class includes an on-site roller coaster build using K'NEX in order to simulate managing a project. When students are as far away as Abu Dhabi, this becomes a logistical challenge. The distance learning students figured out a solution appropriate for today’s global marketplace. Some distance learners were able to make it to Durham to participate and the team “hired” some local talent to fill in their personnel gaps. During the build, they used a Bluetooth headset to connect to a global teleconference with other team members who tracked progress and provided the required status reports. A web camera was used to provide visual assessment of the roller coaster build as it progressed. Through the use of technology, the distance team found a way to overcome some geographical hurdles and completed the roller coaster within the allotted time. Moving forward, this may not be a viable solution for distance learners and I may need to explore other techniques, such as simulations, that are more suitable for distance learning.

With the success of the pilot classes, our intent is to launch a distance learning Master of Engineering Management degree. The distance learning proposal is currently under review. The distance degree will be the same as the current MEM, the key difference will be the delivery. It will be a combined residential and distance format similar to those offered by the Fuqua School of Business and the Nicholas School of the Environment. Students would spend three, 1 week periods in residence in addition to completing 8 courses and an “internship” based on work experience. The residential weeks would be at the start, middle, and end of the program and would incorporate the skills and concepts that our residential students gain through the workshop series.

We are pursuing a distance learning degree option for a variety of reasons. One is that many practicing engineers are not able to take time away from work to participate in a residential program. A distance program will be able to provide an educational opportunity for them and will help Duke fulfill its educational mission. We also believe that the addition of distance students and distance technologies will enhance the experience of our on-site students. Our distance students often have relevant experience that broadens the class discussion. Also, our on-site students have told us that lecture capture is valuable if a class is missed due to illness or travel or to review a part of the lecture that might not have been fully understood. The ability to stream events will also be a way to provide continuing education for our graduates. For example, we were able to do a pilot webcast of a seminar by Keith Harrison, Global Supply Officer of P&G. We are continuing to refine our plans and get the appropriate approvals to launch this new program and are excited about the opportunity to expand our ability to impact society through this new educational initiative.
MEM People

Arjun Reddy chats with Dr. Jeffrey T. Glass

Jeff Glass is Senior Associate Dean for Education at Pratt, and Director of the MEM Program. He shares his thoughts with us today:

On his Childhood and his Path to the MEM program:

Dr. Glass grew up just outside of Baltimore, MD. He remembers spending lots of time outdoors as a child. As a child, he had for company, lots of “horses, goats, dogs and chickens...not to forget two siblings, and an extended family of cousins who lived nearby”.

Jeff attended Johns Hopkins for his undergrad where he spent a year as a Chemistry major and then changed to Material Science and where he stayed on for his Masters as well. For his PhD work, he attended the University of Virginia. Throughout his student life, Jeff had jobs in laboratories and worked pretty hard. On his time off, he liked to go hiking outdoors.

He then came to NC State as a professor, but gave up his tenure to work in R&D, right here in the Triangle. It was during this time that he began to notice a trend with students right out of University. They failed to live up to the expectations of the company even though they were highly intelligent. Dr. Glass realized that the context within Industry was very different from a classroom context. Companies were demanding non-engineering
Another key factor is Duke’s ideal geographic location. With RTP, Duke, UNC and NCSU all within driving distance of each other, there is always a lot of activity. It’s not too crowded, but offers lots of opportunities for students, he says.

The MEM is also lucky to have an exemplary Career Planning and Placement Services Office that is dedicated to our needs, providing a comprehensive job development program.

The Workshop and Seminar series, he says, supplements what’s missing from class work. The availability of such experts and their interaction with students is something you wouldn’t normally find in a traditional University setting.

Finally, the MEM program he says is designed around a company focused curriculum, with a real-world applied focus and intel from the Industrial Advisory Board. He feels that this provides a unique environment to study in.

On how he sees the typical MEMer:

Dr. Glass states that the typical MEM student should strive to become a “T-shaped” individual. An MEM student, he elaborates, has a technical background as his base. He says that students should not come into the program expecting to change their background, but rather to strengthen that base with business and operational knowledge. He sees it as not changing your degree but rather an evolution.
of that degree by effectively applying one’s knowledge to organizations.

Doing a typical MS might cause you to take a deeper dive into technology, but might be less effective in an industry setting. Similarly, a PhD is suitable for someone who is very research oriented. The MEM degree lies almost as a stop between a pure technical degree and an MBA as it has a technology management slant. Your ‘center of gravity’ now moves towards managing technology. He understands the concerns that on the surface, some of the concepts taught in MEM might seem to be more applicable if one were to join the workforce at a management level. We might take a few years to become managers, he says, however, the concepts we learn and our work in team based environments will make us more adept at working with our managers. It will make students more valuable to their company and thus gain more responsibility more quickly (you can see one of his recent Blog posts to read more about this).

Jeff states that he would like to see more representation from Africa and South America in the MEM student body and says that we need to work hard to capture a strong student body from these places. He also acknowledges the cultural differences within the student body, body particularly when it comes to dealing with confrontation. We need to be more sensitive to these cultural differences, he says.

**His advice for those on the job hunt:**

“Treat it as a Project”, he says, “It’s a job to find a job!” He goes on to say that the basics remain the same whether in this economy or any other. He asks us to consider the advice imparted by the many speakers this semester, including Orville Pierson, author of *The Highly Effective Job Search*. It takes time, organizational skills, and project management to find the right job. But we can’t tell the future. It is paramount in this economy to take a broad view on our expected job, but find something that we love to do and are passionate about.

I pressed on the dichotomy of this statement, and paraphrased his answer here:

*There is a balance. You can’t be too picky about finding the perfect job that you love but you also should not take a job just for the money. Rather than focus on only wanting one thing in your jobs, such as money or status, you should look at the job as a complete package and you should constantly move towards the perfect job - you love the work, it pays well, it is in the right location, etc. It might even take years to find the perfect job for you. At the same time, I understand that most of us cannot afford to wait and only take the job that’s perfect for you (We need to take a*
job to make a living after all!) So think of it as a journey and don’t get complacent – there should be constant movement in the direction of the perfect job that you love.

**His biggest regret:**

I asked Prof. Glass; somewhat cautiously if he made any mistakes during his student life, if there was any advice he’d like to share with us. He quoted the advice his professor had once given him about worrying too much about grades:

“I was too concerned about grades... I know many students are concerned about that. I didn’t understand it then as I do now. You should choose your courses at University based not just on the needs of your major or getting the best GPA but based on your interests. After all, you never get that time back...”

**On Capitalism with a Conscience:**

I ended my discussion with Dr. Glass with a topic that had come up the first time we spoke during orientation week. I was fascinated then to hear his views on what he called ‘creative capitalism’ and pressed him to elaborate further. With a glimmer of a smile, and a wizened look of patience, he explained:

“I think it’s only in the last few years that I’ve really understood the limits of capitalism. I think the basic premise of capitalism and market forces is good...I think people should be able to reap the rewards that they are entitled to from their efforts and intellect...
The difference is that on a global scale, opportunities are not equally distributed across the globe. The whole movement of microfinance and businesses with a social conscience is a phenomenal movement in the world today. It tempers the market driven capitalism that brought us to where we’re in the US today with a conscience and allows us to more evenly distribute opportunities. If we didn’t temper it, these opportunities would eventually get to these other locations. But it would take far too long. We should facilitate these businesses and non-profit organizations, which are still sustainable but not driven purely by a show of profits.”

My impressions at the end of the interview? I’m sure the honorable misters Boyatzis and Golemen would agree with me... Jeffrey T Glass has a great deal of emotional intelligence!
A Dukie’s Experience

Moline K. Prak

What three words best describe the Duke University environment? To me, I would characterize Duke to be very entrepreneurial, very interdisciplinary, and very diverse, a combination of characteristics that many universities claim, but very few are able to deliver. Duke is an exception, and I love it here. My experience at Duke has allowed me to have such amazing opportunities that I never knew I could be a part of at such a young age (okay, 23 is not that young, but I’d like to maintain my youth!).

One of my favorite classes is Invention to Application (ITA), a year-long class that guides an interdisciplinary team of students who work to advance a current Duke biomedical innovation and materialize it into a company. In fact, it doesn’t seem like it is a class at all. The weekly “classes” are like large meetings, led by Barry Myers, MD, PhD, MBA and Melda Uzbil, MEM (a 2003 graduate from our very own MEM Program) of the Duke Center for Entrepreneurship and Research Commercialization (CERC). They act as mentors of the student groups as they screen and select one particular technology from a commercially viable portfolio of exciting Duke biomedical research. My team’s selected technology is an innovative biosensor developed in the laboratories of Dr. April Brown of the Department of Electrical and Computer Engineering of the Pratt School of Engineering. By building relationships between inventors and using primary and secondary market research inside and outside the boundaries of Duke’s supreme medical center and university,
the student teams work to build a successful business plan for the new start-up. The “mentors” reach out to their expansive professional network and invite venture capitalists, nationally renowned serial entrepreneurs, and other key experts to assist the students to reach their end goals. My team consists of two MBA students, 3 PhD students, and myself, the MEM student; we represent diversity in many ways. We come from a number of countries, ranging from Japan, to China, to the US, and to Moldova, and we hold a variety of experience levels ranging from business experience at Mitsubishi, to healthcare consulting, to doctoral research on the patterns of HIV transmission and prevention. Talk about diverse! Our business plan was submitted to the Duke Start-Up Challenge where we took second place, and was also submitted to various competitions on and off-campus. Our hard work has also resulted in a 1st Place Prize in the Duke University Graduate Student Poster Business Plan Contest on the National Academy of Engineering (NAE) Grand Challenges, where we received a $5,000 monetary prize. In addition to this great experience, I also have the opportunity to work as a fellow with Melda under the Coulter Translational Partnership Program alongside our astute colleague, Bradford Pantuck. Being a Dukie provides such limitless opportunities!

And of course, the diversity, hard work, and personality of the MEM Program students, staff, and faculty are yet another reason why I look forward to each Duke interaction and activity. I have loved working alongside the brainy and exemplary, fellow MEMer’s, and especially enjoy learning about the various cultural norms of the 19 countries represented in the program. I feel (and hope) that the meaningful relationships that have been developed here will last us all a lifetime! I am proud to be a Dukie!
Dr. L.A’s Advice Column

So before I start answering questions, I’ll tell you a little story. Back when I was doing my undergrad (I speak like it was ages ago, when it’s barely a year since I finished…), I got so sick of my Electrical Engineering classes! It was at the point when I had to take Photonics, Electromagnetics & Linear Systems. I knew I was going to need something to keep me sane, so I ventured over to the Humanities department and decided to minor in journalism. Why? Because I COULD! No, seriously, I asked what I needed to do, and the dude at the office told me to fill out a form that said I needed 18 credits extra. I already had senior credits at the end of my 1st semester of junior year so I thought, why not? OK, the truth is, I enjoy writing, although I don’t write very often, creative writing i.e. (WEIRD, I know) is a hobby of mine. I do write the occasional poem and short story though…

To cut the long story short, I never filled the forms but I did take classes like website design, photography and copy editing. Whenever recruiters saw the minor on my resume and asked about it, I’d spin some crap about how I thought I could combine my writing skills with a technical degree. It shouldn’t be so hard to spin MEM the same way, huh?

So, I got a couple of questions people needed answered…yeah, they give me a job to do.
Dr. L.A’s Advice Column

How do you say NO to team members who want to meet at 7 o’clock on a Friday morning to work on a management case? -Sleepless through Friday

There are people awake that early?? I’m generally awake by 9am, class, work or not, but 7AM! You’re still students, for crying out loud, live a little, sleep MORE! When I was in high school back home, school started at 8 AM, which was perfectly fine. I did that every day for 15 years, No Problemo. When I got to the US, I scheduled a bunch of 8 AM classes my first semester. BAD IDEA! By my 3rd week, I was Suffering, and the capital is intentional.

So, maybe your teammates are new international students? Gently break it to them that 7 AM here is not quite the same as back home. This has nothing to do with time zones, they just haven’t quite figured out what it is yet. If that doesn’t work or if they aren’t international students and you really don’t want to accommodate the meeting, just make up another meeting you already had scheduled for 6:30AM!

If that still doesn’t work and you don’t want to be ‘CREATIVE’, just say NO! Seriously, it works! Jim Camp agrees. For all weird meeting times, Say NO! NO, I have to sleep! NO, I have to eat! NO, I have to jog! Or my favorite, I have a basketball game to go to!

HOWEVER, it’s management class, and there’s that little teammate review thing, so be careful, accommodate the best you can, but if bending your back might turn to breaking your back, don’t do it.

What is the best outfit to wear to one of Gautham’s salsa dancing sessions? For girls and guys? -Clueless

How am I supposed to know? OK, I’ll tell you what I wore last time I went salsa dancing…Wait for it…yup, T-shirt & Jeans! Club 9 had this thing a few weeks ago and I got cajoled into showing up.

I’ve been told I have rhythm & can dance (believe it or not) but I only know the basic steps and after half hr there, I’d started inventing my own steps.
Dr. L.A’s Advice Column

Seriously, have you ever quit trying to do your own crap (read, quit trying to convince yourself you can salsa), and just watched Hispanics and Latinos dance? I have. I’ll tell you, it looks frigging confusing. I get dizzy just watching. My feet will never move that quickly. I’d trip and fall, or worse still, trip whichever chick is unfortunate enough to be with me at the point. So, I stick to the basic steps, front and back, side to side, everyone goes home happy.

So unless you CAN Salsa like Gautham (I’ve heard, the great man gat skillz), guys, stick to a nice shirt and pants, ladies, nice top and skirt or SIMPLE dress. Don’t try that bright red on, or that ‘flashy skirt’, or magician hat, you’ll only make a fool of yourself when you start moving, unless, like I mentioned, you gat mad skillz.

I’m going to sign off here because, yea, I have to go read the management case for my team meeting tomorrow (Fri @ 2:30 PM. Seeee?). So watch out for my column in the next MEMorandum. If you have any questions you’d like answered, send an e-mail to al98@duke.edu. I’ll pick the best 2 or 3 and respond, so make sure they’re good. I might even buy you lunch if they’re that good. Hint Hint!

Peace!
Navigating the Hug

Ronak Patel

As an adult, I feel I should be able to engage in all accepted forms of social interaction, but over the past 25 years I have grown into 150 pounds of raging awkwardness. One of my biggest social obstacles is the hug. It’s hard to understand how a person could lack such a natural skill, so I’ll provide a demoralizing example from my past.

I was talking to a lady that I had met, and there were no social implications beyond those of two people meeting for the first time and carrying on the most banal of conversations. So when it came time for us to go our separate ways she went in for a normal, decent, socially neutral gesture—the front hug. Any normal person could have easily reciprocated the hug and moved on, but someone with my lack of tact and social graces can generate awkward potential from almost any scenario.

When she leaned in for the hug I dug through my repertoire of clumsy responses:

- The Formal: When a girl goes for a hug you intercept her right hand with yours and politely shake.
- The Gratitude: Reciprocate the hug, but as soon as both parties release end by saying, "Thank you"
- The Eye-2-Eye: You fall into that side limbo where both people keep going face to face instead of to opposite shoulders until one person finally says, "Okay you go to your right and I'll go to mine."

(...I've done all of these many times over...)
Instead of using one of my classic moves listed above, I came up with a new one. When she went in for the hug, I dropped my arms straight to my side and locked my elbows so she probably felt like she had just embraced a large piece of dry wall. Realizing her kind gesture was no match for my aptitude as a social disaster, she smoothly transitioned into the side hug. Then I escaped home, which was a quick trip because I didn't have to carry all that dignity and self respect around anymore.