

The Classroom

Center for the
Enhancement of
Teaching &
Learning

The Newsletter For Teaching and Learning at Georgia Tech

Spring 2008

Contents

Teaching Seniors by Dr. Donna Llewellyn	1
In Their Own Words: 4 Seniors Reflect on Their Experiences at Georgia Tech by Diane Dutcher, Rachel Harkness, Adam Tart, & Becky Tucker	2
A Snapshot of Seniors & Their Perceptions: Findings from the 2007 National Survey of Student Engagement by Dr. Joyce Weinsheimer	11
CareerTech Portfolios by Ralph Mobley	12
Tips for Writing Excellent Letters of Recommendation For Your Students by Dr. Karen Head	14
In the CETL Library: The Senior Year Experience by Dr. Steven Girardot	16
The Undergraduate Thesis Option by Dr. Karen Harwell & Dr. Donna Llewellyn	18
Spring 2008 Events	24

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Teaching Seniors

by Donna C. Llewellyn, Ph.D.
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In the Spring 2005 issue of *The Classroom* we opened with the words: "If you teach a course that is primarily taken by upper-level students then you can have some confidence about what prerequisite courses the students have taken and hence about what prior knowledge the student has had. In addition, the typical upper-level student has adjusted to dorm or apartment living, remembers to eat on a fairly regular basis, knows what a college exam looks like, etc." That issue was dedicated to teaching the first year student and we were setting the stage for how different the entering freshmen are from our more advanced undergraduates. However, there are indeed challenges to teaching the senior students. They are increasingly preoccupied with life beyond Georgia Tech: interviewing for jobs; applying for scholarships and graduate school; saying goodbye to good friends while looking forward to starting afresh. On the other hand, these students have a good solid academic foundation and are hungry to apply this knowledge in a practical setting, going beyond their classroom learning.

This issue of *The Classroom* is dedicated to the issues surrounding teaching senior students. We offer advice to those of you who receive requests for letters of recommendation, and we review a book that describes the issues that are unique to educating seniors. We share a brief profile of how our seniors compare with those from our peer institutions with insights gained from the National Survey on Student Engagement (NSSE). We also give an in-depth description of the "thesis option" – a newly adopted opportunity for our students to do advanced research and document it in a senior thesis. And, just as we did four years ago, we also include the student point of view. The four students who kept journals for us during their initial term at GT repeat this exercise for us during their

continued page 15

In Their Own Words: Four Seniors Reflect on Their Experiences at GT

Diane Dutcher, Rachel Harkness, Adam Tart, & Becky Tucker

forward by **Donna Llewellyn, Ph.D.**
Director, CETL

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Back in Fall 2004, CETL invited four first semester students to keep a journal and then to share it with the campus. In the Spring 2005 issue of *The Classroom* (<http://www.cetl.gatech.edu/resources/classroom/classroomS2005.pdf>), we published these journals in order to give our faculty an insider's view to what our first year students are going through (academically, socially, and emotionally) as they make the transition from high school senior to college student. For this issue on teaching the senior, we went back to Diane Dutcher, Rachel Harkness, Adam Tart, and Becky Tucker and asked them to repeat this exercise. The four of them graciously made the time in their busy schedules to get us caught up on their lives at GT and their plans for the future. As we said four years ago: Read, Remember, Reflect, and Realize. Most of all, enjoy!

Donna Llewellyn

Fall 2007 CETL Blog: Diane Dutcher
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“Life is not about finding yourself – it’s about creating yourself.”

George Bernard Shaw

I just recently discovered that you will never ‘find’ yourself out there – we are simply a collection of the influences, experiences, and relationships in our lives, so we should all stop aimlessly grabbing at the air, grasping for those persons we wish

we could be and learn to love the people we are becoming.

October 18, 2007

It seems so long ago that I was a freshman, living in Harrison with some of my fellow Yellow Jacket ladies, wondering where my life was going. Wow, I have been involved in so many enriching and exciting things in the past several years—changing my major, moving to four different apartments, studying abroad in Italy and Greece, hiking for a month on the Appalachian Trail, volunteering in New Orleans, training for and completing my first Olympic-distance triathlon while raising thousands of dollars for the Leukemia and Lymphoma Society, coaching six youth soccer teams, becoming an advisor and mentor to dozens of freshmen...to just name a few of my experiences since my first semester at Georgia Tech. Gosh, when I try to quantify and list the experiences, I am not doing any justice to how these opportunities have molded me. It is very difficult to identify and say just how each of these experiences has shaped my life, but they all collectively add to who I am today and who I continually strive to become.

I just read over the blog entries that I wrote as a freshmen and I could not help but feel empathy for the girl I once was. I know what that feels like, to not know what is in store for you, to constantly question your life. But I feel like I’ve

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grown into my own overly analytical self and learned to accept that sometimes, we need to just stop worrying. We need to embrace life because it's beautiful. Yes, life is beautiful. It continues to impress and surprise me. It continues to shine on, regardless of how we are feeling. Life happens and we must empower ourselves to look it in the eye and promise ourselves that we will take advantage of its opportunities.

October 30, 2007

So I went for a run today that kicked my butt. Literally – it dominated and possessed me. They say that running is powerful, but this was exactly what I needed. Sometimes, I just have to remind myself that I'm alive – and free – and full of energy. And when I doubt it, I go for a long run, which is usually pretty effective.

November 19, 2007

I need to prioritize. I need to focus. I need to breathe. I need to hike, to run, to explore, to escape. I need to love myself first.

So many questions right now: What is best for me? How and where do I want to make an impact? Where are my priorities? There are so many and it's hard to define the lines between them. Talking to my mom always helps me sort through things; she usually gives me clarity. Lately, I've felt compelled to just trust my instincts, to do what feels right....so I will continue to do so. I just need to trust my gut if I'm going to make it through all these decisions, all these 'big moments' where I'm supposed to "decide my life path," as everyone else always says. Honestly, there is no way that I want to decide my life right now, or ever. You don't decide exactly how your life will be – you have to embrace what comes your way and learn to love the unexpected.

December 15, 2007

So I'm about to embark on an adventure of snowboarding tomorrow. Oh gosh. I just got fitted for my board, boots, and bindings – and I'm a little nervous but pretty darn excited to be trying something so new, so outside my comfort zone. On another note, this past weekend has been a whirlwind of emotion and new feelings, all of which were wonderful. I yearn to relive those moments. Also, finals are officially over and my life is about to exponentially improve, with an incredible winter break on the horizon.

December 17, 2007

Today's snowboarding session was amazing! I hit both runs (that I had been working on the past couple days) without falling AND I even did the box rail successfully. Sweet! I wore my iPod for most of the day and it was really awesome to feel 'one' with the slopes – and shut all the other noises out and experience the snowy obstacles. The past couple days have been eye opening to my

When I try to quantify and list the experiences [I have had since my Freshman Year], I am not doing any justice to how these opportunities have molded me. It is very difficult to identify and say just how each of these experiences has shaped my life, but they all collectively add to who I am today and who I continually strive to become.

Diane Dutcher

own potential, as I was able to push beyond my limits and feel comfortable snowboarding. I can't wait to come back – and maybe I'll go out West next time, rather than battling the snow-making machines and crowded slopes in North Carolina.

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December 31, 2007

This is so powerful. Yes, powerful – that’s got to be the best way to describe what is happening with my life, with my perspectives on certain issues, with my relationships, with my views. It is all changing; it’s so freeing and empowering. Let me preface this entry by saying that I saw “Into the Wild” last night and my experience seeing that movie has been life changing. I know that sounds ridiculous and cliché, but I just know that I see things differently now. The movie personifies so many important things in my life right now. It talks about seeking truth, about giving things the “right name,” and how love, music, and books are the keys to happiness. And, as the movie declares, “Happiness is only real when shared.” I’ve realized this over the course of the past several years, especially lately. As soon as that shared happiness fades, it is no longer real. Real is defined by our ability to experience something, to express it within the context of our own lives. You can’t go through your life alone. My journey continually involves other people, allowing me to see things through the context of others and their values and perspectives. It is my relationships with people that mold me the most, yet I cannot ignore the influences of my experiences with society and the places I’ve been. I now see every day as a chance to create myself, to learn, and most of all, to grow.

Fall 2007 CETL Blog: Rachel Harkness
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When I was asked to keep a journal now, three years after my freshman year, to see how I’ve changed, I immediately thought that the excitement, and the optimism have left my eyes. Unfortunately, when I went back to read what I said then, I was very honest but also extremely discouraged. My first year in a new place there were many new lessons to learn; hence, I relearned my ABC’s. From aim and balance to frustration in a zillion tasks that had to get done, unfortunately, every letter had a downside to it. While I think it’s important for teachers to know that most students face many discouragements while at Tech, it’s more important for students to realize what they learn from it. This time while going through the daily grind I reflected on lessons learned by me and others.

I learned about the truth of GaTech my first semester; however, a couple years later I have a different view on school and life. I know that stressing about classes isn’t necessary—it’s something I still struggle with daily. Unfortunately, it’s a way of life here at Tech to freak out and think you’re going to fail, but as we learned from Batman, “Why do we fall? So we can learn to pick ourselves up.” I’m thankful for the friends, family and roommates I have that are always there to help get me back on my feet. We’re all going through the same stress, so we should help each other out. Charles Shultz pointed out that we don’t remember who won the Heisman or Miss America the last four years, but we know who really touched our lives and helped us get through trying times. My friends and I talk, unwind, and really enjoy the down time. I used to think I was the only one going through difficult times; however, now I know there are many others worse

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off, and for those of us here at Tech we're really more alike than we think. It takes a lot of work to be here regardless of your major; therefore, make sure you like your major and it suits you. That took me a long time to grasp. I switched majors a couple of times and now I really enjoy my classes; I learn things I find interesting and relative to what I want to do. Grades are great and it's important to do well, but really what's the worst that will happen? I'll fail a class? Well, I've done that, and I'm still here. I've learned that it is much more important to have a strong work ethic. At Tech everybody is smart and most are smarter than me; however, I know what will set me apart:

"The difference between a successful person and others is not a lack of strength, not a lack of knowledge, but rather a lack in will."

Vince Lombardi

In the real world, "Success is the sum of small efforts, repeated day in and day out," explains Robert Collier. I learned first hand the truth in that when I co-oped with a great company. They taught me a lot, and allowed me to experience new things. The people I worked with were also invested in what I wanted. My boss told me, "It's important to discover what you like as well as what you don't like."

I've experienced love and loss, success and failure, and I've learned some lessons it takes many people a lifetime to learn. Some of what I went through will be some of the hardest times in my life, it's something I will take with me, knowing I can be strong enough to push through anything. Like my dad always told me, "After every hard uphill, there's a downhill." Yet, in all that I have learned I realized how little I truly know and how vast the unknown remains. Yes, if I could go back I would do a lot of things differently, but I think my experience has given me so much more.

Fall 2007 CETL Blog: Adam Tart
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August 31, 2007

I've been asked to keep a journal/diary of my first semester of my fourth year at Tech. This is a followup to the journal I kept of my first semester as a first year. I just went back and read my original entries... ah, nostalgia! I can't believe three years have passed... where has all the time gone? I'm getting old, I guess.

I suppose I could summarize what I've been up to since my freshman year. I've taken classes every semester (but I won't bore you with the details), and I've gotten to do some really cool activities outside of the classroom during the semesters, too. For my second and third years, I was a calculus teaching assistant. During my second year, I got to help out with the recycling program on campus. And during my third year, I participated in a couple of math research endeavors. I tried to make the most of my college summers, too, using the ones after my first, second, and third years to study abroad overseas, do research abroad, and take an internship abroad, respectively.

Having all of my activities written out like that really makes me stop and think about just how many interesting opportunities college has afforded me. Looking back to my first semester at Tech, I never would have thought I would get to do all of those things!

Now, here I am, just having started my fourth year at Tech. I'm in the graduate program now: I received my B.S. in Discrete Mathematics in the spring and am now pursuing an M.S. Statistics through the ISyE department. So I suppose it's like I'm a freshman all over again! I'm finding I'm not at all nervous or intimidated by my classes like I was when I was an undergraduate freshman, though. My energy is more directed toward

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getting my homework done, deciding what I want to do in the evenings and on the weekends, and figuring out my future career than toward stressing about my classes. Does this mean I've gotten more mature? Yeah, right...!

Speaking of my future career, perhaps the one thing that I am more nervous about now than I was when I was a freshman is the knowledge

I won the Mitchell Scholarship! It looks like I'll be going to Cork, Ireland for a year to pursue an M.Sc. in Mobile Networking and Computing at University College Cork.

Adam Tart

that my time in college is almost up and the "real world" is just around the corner. I still don't know what I want to do, yet... maybe I can just stay in college forever.

September 16, 2007

Well, it looks like I figured out how to further delay my entry into the real world and remain a college student for a while longer! I have been learning about and applying to several different overseas postgraduate programs that are offered through prestigious fellowships and scholarships. I'm not entirely sure which program to pursue, nor am I confident that I could win one of the fellowships since they are so competitive, so I have decided to apply to several different ones! I've always really wanted to do something with computer science, so it looks like my options through the different fellowships I'm exploring are a master's or Ph.D. in computer science from Cambridge, Oxford, or a university in Ireland. During my study abroad after my first year at Tech I studied at Oxford, and I absolutely loved my experience over in that corner of the world. I'm excited about

the prospect of getting to go back. Now I just have to hope I win one of these...

What else is new? Well, I'm living in a house off campus, now. It's not too far from campus, so I don't feel like getting to class is a hassle, and it's a wonderful feeling to have my living space separate from my classroom space: I no longer feel like I can't escape from school. With more privacy, cheaper rent, a much bigger room, and great roommates... well, that's hard to beat!

I'm having a blast this semester. Grad school is more fun than my friends made it out to be.

October 20, 2007

Man, oh man. I'm almost done applying to all of these fellowships and scholarships and preparing for interviews. I'm so incredibly relieved! I didn't think it would be so much work, but writing essay after essay, tweaking and updating my resume, and filling out 8 different applications really takes its toll, especially in the form of decreased sleep... I'm finding that I've spent about 10 times as much time and effort on applying to these fellowships than I have on my graduate school work. Thankfully I'm not finding my classwork overburdeningly challenging, otherwise I don't think I'd be able to handle this workload.

So I guess I really am finding grad school easier than undergrad. I think this is because of three main reasons. First, there is less homework, and learning the material is a responsibility that's more on the shoulders of the student than the professor; so I feel like there is less written work overall. Second, my schedule is awesome. Third, I went from an undergraduate program that was very, very theoretical to one that is much more practical, so I'm finding it easier to grasp the material. In any case, it's still a challenge, and I'm really enjoying learning about statistics, a field that I see as one of the most important and influential around.

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After all, any organization has the need to analyze its data, right? On a side note, I've been playing a lot of guitar to take my mind off the stress of all this work. I'm teaching myself, so I'm not quite at the Jimi Hendrix level yet... but maybe by the end of the semester I will be.

November 20, 2007

This is going to be a short entry. I just wanted to quickly say that it's been a fantastic month since my last entry, and then I'll write more over Thanksgiving. Here's what's been great:

I won the Mitchell Scholarship! It's a wonderful feeling to have all my hard work with those applications pay off... so it looks like I'll be going to Cork, Ireland for a year to pursue an M.Sc. in Mobile Networking and Computing at University College Cork! That'll certainly be a year I'll never forget.

I broke my personal record for running a 5k! It's still pretty slow compared to "good" runners, so I won't mention what it is, but I'm happy to know I'm actually improving at one of my favorite activities, running.

Last, but certainly not least, I have a new girlfriend! She's wonderful, and life is good!

November 22, 2007

Well, another Thanksgiving is here. I planned on writing a longer entry about what I'm thankful for, but I can't really muster the strength to write much for now. I ran the Atlanta Half Marathon this morning, and it was freezing and raining, so I feel pretty sick. I couldn't really even eat Thanksgiving dinner with my family, but I am thankful that I'll get to enjoy the leftovers! Happy Thanksgiving!

December 25, 2007

It's Christmas now, which means the semester is finally over! All the work that I felt I wasn't doing throughout the semester really caught up with me in the last few weeks. Lots of studying for finals, several involved projects, mounds of homework... I'm glad it's over. I really have enjoyed the material that I've been learning, as much work as it proved to be, though. I'm not sure if statistics is what I really want to do the rest of my life (since I'm planning on getting into computer science), but I've found it really interesting and useful. At the very least, I feel like it's a continuation of my math undergrad education, but from a different angle (perhaps an engineer's angle?) which has proven to be fascinating.

I'm not sure if statistics is what I really want to do the rest of my life (since I'm planning on getting into computer science), but I've found it really interesting and useful. At the very least, I feel like it's a continuation of my math undergrad education, but from a different angle (perhaps an engineer's angle?) which has proven to be fascinating.

Adam Tart

But enough about my schoolwork. More interestingly, I'm in Israel right now! I am participating in a program that provides a 10 day tour of Israel, and I thought it would be a really cool and different way to spend my winter break. I've never been to the Middle East before, and it has been really interesting. One thing I notice when I go abroad is that other places always remind me of home, but little things here and there are different enough to remind me that I'm away from home, too. For example, breakfast in my hotel here has eggs, cereal, bread... but halva and herring, too. I'm excited to see more of the country, and it's getting me excited for my trip to Ireland, too; I can't wait

continued next page

to take advantage of travel opportunities while I'm over there. Also, I can't forget to mention that my birthday was yesterday. I'm now 22, and it doesn't feel any different from being 21. It was fun to get to celebrate my birthday in downtown Jerusalem... that seems like a rare treat to come by. Bed time now. This tour of Israel leaves almost no time for sleep, so I've got to take advantage of it while I can.

December 31, 2007

It's New Year's Eve, and I thought it would be a fitting day to write my last journal entry before I headed out for the evening to celebrate another year come and gone. I'm back in America now (thankfully - I missed it!), and I'm in my room reflecting on the year, and more importantly for this journal, the semester. I've realized that despite my best efforts to the contrary, I have matured - I do feel more ready to take on the responsibility of adulthood. I've also realized that I don't get that stressed out anymore over large amounts of work - things always seem to work out for the best in the end. And I've realized that college (and now grad school) really has been the time to explore new things and learn more about oneself. Not that that really ends when school's out, but I have more time to do so as a college student. Anyway, I don't really need to lament on the topic... I've still got more school ahead of me! (Yay?)

I wonder what the future will hold for me. What will Ireland be like? Will it be fun and inspiring? Will I become involved in a field of study that I'm really passionate about? How will I handle being away from my family, friends, and girlfriend? When I come back, will I go for a Ph.D.? What do I want to do with the rest of my life? This is the same question I asked myself before coming into college. I guess college itself doesn't necessarily provide the answer. For now, it seems like I just have to keep searching. If all else fails, I've always got street-guitaring to fall back on.

Happy New Year!

Spring 2005 Excerpts from *Teaching First Year Students* Issue

Diane Dutcher:

"I don't know who I am anymore. Everyone says college helps you discover who you are...who you want to be. But before I came to Tech, I felt like I had a much better grasp of who I was. Before meeting all these new people. Before my chronic lack of sleep."

Rachel Harkness:

"I had always heard people say Tech was the hardest thing they ever went through, but they made it through so I figured it had to be do-able, but I began to doubt myself early. I know plenty of people who have gone to college and now are successful in life. If they can do it I can too—right?"

Adam Tart:

"Many times at night I've gone to the Campanile and just watched the fountains run and the lights slowly reflecting different colors off the spire. I recommend the activity for anybody who wants to clear his head; it's great for reflection, in both the literal and the metaphorical ways."

Becky Tucker:

"I'd like to know who came up with the college learning process: 'So, we're going to put them in much larger classes, with less class time, and then the lab and class components of the same class should be COMPLETELY unrelated. Yep, sounds good!' " This idle musing, written the first month of my freshman year at Georgia Tech, was one of my earliest observations about college life.

*If you would like to read the original article in its entirety, it is available online at this address:
<http://www.cetl.gatech.edu/resources/classroom/classroomS2005.pdf>*

continued next page

Fall 2007 CETL Blog: Becky Tucker
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27 August 2007

I didn't expect my semester to get quite so hard this quickly. Once my Spanish professor returned, I realized that three Spanish classes are too much for a semester when I am also studying for the Physics GRE and trying to get my fellowship and graduate school applications in order. So I've dropped one of the Spanish classes and I'm only teaching one lab this semester instead of two.

Throughout my time at Georgia Tech, I have never ceased to be thankful that my AP credits allowed me to take fewer hours. (High school students, take note.)

It's strange to be a senior. The gulf between freshmen and seniors in high school is almost the difference between children and adults. The change between being a freshman and senior in college, while not quite as vast, is still pretty big. The difference here is that everyone matures between the ages of 14 and 18, while only some of us have matured between 18 and 22.

The freshman are starting to lose their "lost-sheep" look, but most of them still aren't sure if they've chosen the right major and they don't know what they want to do after college. Which is as it should be, because they have four years of college to figure it out. But I'm beginning to worry about people in their fourth, fifth, and sixth years who are still hopping from major to major, drinking like fish, and generally wasting time and money here. Really, it's not that cute at 18, and it's definitely not cute at 23 Maybe

it's weird that I know what I want to do next.

12 September 2007

You know what I love? A fire alarm going off at 4:00 am. Nothing creates a good night's sleep like a loud, repetitive siren. What made it worse was that I had gone to bed really late after finishing a Spanish paper, so I hadn't even been asleep for very long.

Fire alarms are a once a week occurrence here in married housing. I talked to a guy who has lived here for a year already, and he said that last year it was worse. Apparently there was a grad student who would start cooking dinner, then forget he was cooking and go to his lab.

Something I find mildly amusing is that it takes the police at least 15 minutes to get here, and the

Georgia Tech has really been a wealth of opportunities. I've researched within the physics department and had the ability to go to other universities over the summer. I've researched binary stars, high-energy particles, and gravitational waves. My research was intentionally broad because I wanted to know what I liked best as a physicist.

Becky Tucker

fire department never actually shows up. The fire alarm this morning was apparently caused by a small fire on the fourth floor of another building.

1 October 2007

I have a Spanish exam, an Optics assignment, and two Spanish film essays due this week. Not to mention that I'm studying for the Physics GRE, which I take in five days. I am more than a little stressed.

continued next page

I took a practice Physics GRE last night. (Mind you, this involves blocking three hours out and answering 100 physics questions.) My score was... not great. I'm a little depressed by this, actually. I don't know how much I can improve in the next few days, but I'm going to take more practice exams and review more material.

13 November 2007

I've pretty much been moping around for the last four days, but I think I'm done now. I got my Physics GRE scores back and they were disappointing. I don't know what happened. I just had a stupid day, I guess.

Still, time and applications march onward, so I must stop moping and start working like a crazy woman again.

30 November 2007

Woohoo! One graduate school application is done. I submitted my life's story and \$85 to USC. Let's see if they take me.

Also, applying to graduate school is expensive. I think, all told, that Brad and I will end up paying around \$600 just to apply. That doesn't even include the \$540 we've already spent to take standardized tests. Being a grown-up is expensive; I don't recommend it.

15 December 2007

Whew! My applications are all in and our schoolwork is all done. I spent most of today cleaning up the apartment and packing because we are leaving for Brad's parents tomorrow! It's almost Christmas.

1 January 2008

I can't believe it's 2008, the year I graduate from college. Somehow, I kept expecting it to get

easier. Freshman year was hard, but I figured that once I settled in and figured out Georgia Tech, it wouldn't be so bad. Nope, it just got harder as I moved into my upper level courses.

It's so funny now to think back to where I've been. I started as an aerospace engineering major at Tech. As an incoming freshman, I knew only that I liked physics and the airplanes were really cool. After an internship the summer after my first year, I knew that aerospace engineering was not right for me. I switched into physics, my first passion, and have been happily learning about Maxwell's equations and stellar nucleosynthesis ever since.

Georgia Tech has really been a wealth of opportunities. I've researched within the physics department and had the ability to go to other universities over the summer. I've researched binary stars, high-energy particles, and gravitational waves. My research was intentionally broad because I wanted to know what I liked best as a physicist.

And, of course, I got married after my third year of college – which is admitted an unconventional choice. Still, I think I've had a very traditional undergraduate experience.

If I had to do this all over again, here's what I would do differently. I would join fewer organizations my freshman year and avoid serious organization burnout. I'd get to know my classmates better and spend more time studying in groups. I would have started on my minor earlier. I would have spent less time online and more time with people.

Now that my last semester of my undergraduate degree is upon me, all I have left to do is sit and wait for our acceptance or rejection letters. Wish me luck!

A Snapshot of Seniors & Their Perceptions:

Findings from the 2007 National Survey of Student Engagement

by **Joyce Weinsheimer**, Ed.D.
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What do seniors think about their educational experience at Georgia Tech? How do our students' perceptions compare to those of seniors from other campuses?

The Georgia Tech Office of Assessment has the answers to these questions. Using the National Survey of Student Engagement (NSSE) to survey Georgia Tech students about the quality of their educational experience, the office is able to determine what GT seniors think about the process of earning a Georgia Tech degree as well as compare the results with the findings of six "institutional peers." Director Jonathan Gordon and Survey Coordinator Joe Ludlum recently published these findings in the *National Survey of Student Engagement: 2007 Institute Report*. Here are a few of their highlights:

High Expectations: 94.7% of GT seniors report a high degree of institutional emphasis on studying. This is significantly higher than what 84.8% of seniors at the comparison group institutions reported. GT seniors were also more likely to report studying over 11 hours per week than their counterparts (70% vs. 63.7%).

Collaborative Efforts: GT students were significantly more likely than their counterparts to collaborate on academic work outside of class. 80.5% of GT seniors report frequent collabora-

tion on projects, while only 67.4 % at comparison schools reported such efforts.

Involvement in Undergraduate Research: A significantly higher percentage of Tech seniors reported working with faculty on research projects (39.0% at Tech compared to 30.2% of seniors at comparison institutions). For Tech seniors, this also represents a dramatic increase over two years ago, when only 29.9% reported working with faculty on research initiatives.

Participation in Enriching Educational Experiences: GT seniors were more likely than students at comparison institutions to report frequent interactions with students from diverse backgrounds, both from a racial and ethnic perspective as well as from a religious and political perspective (65.1% at Tech vs. 60.7% at comparison institutions). Outside the classroom, GT seniors reported spending over six hours per week on co-curricular activities such as student organizations and government (43.3% at Tech vs. 39.0% at comparison institutions). As for academic enrichment options, GT seniors were more likely to study abroad (27.9% at Tech vs. 18.7% at comparison institutions).

Culminating Senior Experience: Over half (57.1%) of the seniors at Tech reported participating in a capstone course, thesis, or senior project,

continued page 15

CareerTech Portfolio

by **Ralph Mobley**

Director, Career Services

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During a student leadership retreat an influential group of Georgia Tech students expressed a desire to document their leadership, volunteer, and other extracurricular activities in a single comprehensive tool. What began as a request to record their full range of academic and life experiences ultimately morphed into today's CareerTech Portfolio. The discussions that led to its development revolved consistently around tracking leadership and other extracurricular activities as well as building student awareness of critical skills.

A project team composed of students, Student Affairs and OIT staff and administrators was put in place to investigate existing systems and/or develop something new. They identified a system developed at Florida State that met most of the criteria students desired and the development process to create a highly customized version for Tech students began.

Welcome to the CareerTech Portfolio! The portfolio is an interactive tool that allows students to record, reflect upon, and evaluate experiences, both in and out of class. The portfolio can be used in a variety of ways, from helping students choose courses and school activities to showing potential employers and others what they've learned and accomplished. Through the CareerTech Portfolio, students can:

- Learn about skills employers value,
- Build a detailed portfolio of skills, experiences, and accomplishments,
- Include online resumes, references, and work samples.

Five key components of the portfolio are the Skills Matrix, Profile, Resume, References, and Artifacts/Examples. The system provides the ability for students to share, in a password protected and individually tailored way, all of the portfolio information with potential employers and other guests.

Ting Chen, Senior Industrial Design major states that CareerTech "...lets me attach my industrial engineering designs in the artifacts sections, so that future employers can see them. It's almost like the site was designed just for me, and, as long as I keep my Georgia Tech e-mail address I can keep using it, even after I graduate." CareerTech creates a more comprehensive picture of a student's skills and abilities than can be portrayed in a traditional resume.

The Skills Matrix is the heart of the CareerTech Portfolio. Here students write about experiences in each of six areas including courses, work experience, service/volunteer work, interests/life experiences, and scholarship. For each of these areas students may select one or several of the delineated skills. These include communications, leader-

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ship, critical thinking, teamwork, and several others. Students can document specific skills learned and where and how they learned them. “Working with the Skills Matrix puts classes in a different context. Instead of checking off boxes on a degree petition, using the Matrix allows students to be actively engaged in acquiring skills for the rest of their lives. In addition, while technical knowledge is an important component of success, it becomes clear that a host of other skills are equally relevant in the workplace” said Anu Parvatiyar, Senior Biomedical Engineering major.

The goal is for students to expand their skills matrix as their experience and skill levels grow. Nearly every experience is useful in developing important skill sets and students can use the matrix as a professional diary where they keep track of their accomplishments. The information is particularly valuable when writing a resume or preparing for an interview. If a student has documented pertinent skills and experiences over time, the portfolio makes it simple to review accomplishments and download the narratives to a built-in resume template. Reviewing the skills matrix prior to an interview is an excellent way to refresh memories of specific examples of skills and accomplishments students may have forgotten. Sophomore Mechanical Engineering major Alex Roan notes “CareerTech's strongest asset is its ability to organize one's achievements for presentation and reference. As students, we strive to accomplish and CareerTech ensures that not one of those accomplishments is forgotten.”

Other key features include the ability to create a profile, essentially the portfolio's cover letter, where students may write an introduction, description of goals, or anything else they'd like to present. The resume section allows students to upload and store multiple resumes and to download information from the skills matrix into a resume template. The reference section allows the user to keep up with contact information of references and the artifacts section enables uploading and

sharing of everything from essays, presentations and images to links to personal websites.

The management component of the system lets users create up to three separate and unique portfolios, select desired portions of stored information to share, provide password protected guest access, and track guest access. Additionally, CareerTech provides flexibility by allowing resumes to be shared and tracked separately. The system is a comprehensive way for students to journal, track and share their Georgia Tech experiences. The system is designed for Tech students; however, faculty can be given access upon request. For more information contact Ralph Mobley.

PORTFOLIO KEY COMPONENTS

Skills Matrix

Profile

Resume

References

Artifacts/Examples

The system allows students to share, in a password protected and individually tailored way, all of the portfolio information with potential employers and other guests.

***For more information please visit,
www.careertech.gatech.edu***

Writing Excellent Letters of Recommendation

by **Karen Head, Ph.D.**
Graduate Communication Coordinator, CETL
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Writing recommendation letters is an experience that even in the best of circumstances most of us would rather avoid. The primary reasons for our avoidance have little to do with our opinions of the students for whom we are asked to write. Rather, it is the process, which is so often onerous. Apart from the obvious, like the time it takes to actually write a letter, it seems that the periods when such letters must be written are concomitant with the busiest times of each semester. Each term it happens. You have stacks of exams and papers to evaluate, student conferences to hold, and end-of-term meetings to attend. Consequently when the line of students requesting letters of recommendation begins to form, you are already overwhelmed. Nevertheless, you have a responsibility to continue a tradition (one that helped you move forward in your own career) by writing the best possible letters for your students. You have the added responsibility to provide candid and honest appraisals of a student's past performance and future potential. While you may help a student with a "candy-coated" letter, you will simultaneously ruin your reputation—something that can damage your career well beyond your role as recommender. Following are some suggestions to help you make the process as painless as possible.

1) **Never agree to write a recommendation unless it will be favorable.**

Remember I said you must write the best possible letters? The most important thing you can ever do for a student is to explain why you are not a good choice as a recommender. While this is a difficult conversation to have, it is imperative that you have it. When students request recommendations, they believe that the letters will be favorable; it is unfair to provide letters that do otherwise. Remember that these recommendations are not being solicited from an employer or graduate program directly. Students have a right to assemble the best possible dossier.

2) **Insist on meeting with the student.**

Attempting to write a recommendation without discussing the application situation with the student is like trying to write a scholarly article without doing any research. The best recommendations are specific and speak clearly to the applicant's ability to be successful in a given situation. Not expressing a clear understanding of the situation will make for a mediocre letter even if you believe the student is an excellent candidate. If a face-to-face meeting is impossible, at least plan for a 30-60 minute telephone meeting.

3) **Do not do more work than you should.**

Make students responsible for as much of the process as possible. Insist that the student provide you with a portfolio of materials, including a

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resume (or c.v.), a copy of the job ad or graduate program overview, a writing sample, a personal statement, a schedule of due dates, addressed and stamped envelopes, and any online submission information.

4) **Be honest.**

Avoid any temptation to extrapolate or embellish a student's capabilities. Speak clearly and directly about what you know concretely. Offer specific examples as evidence for your argument(s). Yes, I said argument. Recommendations should be some of the strongest arguments we ever make.

Ultimately, try to remember that while the process of writing recommendations is a bit arduous, there is no greater joy than when a student appears at your door to thank you for helping her/him get a dream job or into graduate school.

fourth fall semester – read about their experiences and cycles of emotions as they prepare to graduate from our institution. (What a wonderful statement that all four of these exemplary students are still here!) It is important for us all to better understand the issues of our most senior undergraduate students. These are our soon-to-be alumni who will go out into the wide world and speak of their time here. They will be our ambassadors!

So what can you do as part of this community? Spend some time talking with other instructors who interact with seniors. Volunteer to advise a student in undergraduate research. Volunteer to mentor a senior as they wrangle with the decisions of what to do next in their lives. And please, let me know if there is anything that you think CETL can do to help GT faculty in their academic interactions with seniors.

whereas only 29.4% of their counterparts reported participating in similar activities.

Feedback from Faculty: While 54.5% of seniors at the comparison schools felt that they received timely feedback from faculty, only 42.0% of GT seniors reported prompt written or oral feedback on their academic performance. In addition, this was one of the few survey items for which there was a significant decrease in favorable responses from Tech students. In the 2005 survey, 52.7% of GT seniors reported receiving prompt faculty feedback.

Levels of Academic Support: Over 73.0% of the seniors at comparison institutions reported positive relationships with faculty, yet only 55.6% of Tech seniors reported friendly and supportive relationships with faculty. Seniors at GT also reported lower levels of academic support from the Institute—58.8% said they received the support necessary to thrive academically, compared with 68.6% of seniors at comparison schools. Perceptions of both support from faculty and the Institute are improving, however. In 2005, only 49.0% of seniors felt that GT faculty were available to provide helpful assistance, and only 53.1% reported that the Institute provided the necessary academic support.

Satisfaction with Overall Educational Experience: 88.5% of GT seniors rated their entire educational experience as “good” or “excellent.” While these figures are slightly lower than those at other institutions (90.0%), Georgia Tech has experienced incremental improvements in overall student satisfaction in each NSSE administration since 2001. The vast majority of Tech seniors (82.8%) say that if they were to start over again, they would still choose Georgia Tech.

In the CETL Library

The Senior Year Experience

by **Steven Girardot**, PhD
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The Senior Year Experience: Facilitating Integration, Reflection, Closure, and Transition

John Gardner, Gretchen Van der Veer, & Assoc.
San Francisco: Jossey-Bass, 1998. xxvii + 351pp

Over the last twenty years at Georgia Tech, we have given considerable attention to our Freshman Class. The Freshman Experience and GT1000, The Freshman Seminar course, have been successful in increasing retention and satisfaction in the first year and persistence to graduation. Recently, we have begun examining our students' sophomore year. Motivated, in part, by the recent acquisition of the North Avenue Apartments from Georgia State University, an Institute-level task force comprised of Academic and Student Affairs staff, Residence Life staff, and faculty was commissioned to examine the transition and academic needs for second-year students and to explore the possible creation of a campus wide "Sophomore Year Experience" program. One of the preliminary findings from this task force was the need to provide support to help transition sophomores into their academic departments and engage their more fully in their major and with their faculty.

With this emphasis on transitioning students into the Institute and into their majors, the question arises- should we also look at developing

programs to support transitioning students from higher education? Do we need to consider a GT 4000 course to complement GT 1000? In their book *The Senior Year Experience: Facilitating Integration, Reflection, Closure, and Transition*, John Gardner, Gretchen Van der Veer, and several prominent co-authors in the field of higher education- such as Arthur Chickering, Alexander Astin, and George Kuh- lay out a strong case for developing intentional programs and services to support seniors in this transition. Overall, they advocate that "the outcome of the undergraduate experience should be more than a framed diploma...colleges and universities can and must intentionally and successfully influence and enhance outcomes in a variety of specific ways" (19). One way to achieve this outcome is to create a "Senior Year Experience," which Gardner and his co-authors define as "the total experience of seniors inside and outside of the classroom, as provided by the faculty, student affairs officers, academic administrators, and seniors themselves" (xiii).

Intended for a broad audience, including faculty, academic and student affairs administrators, development officers, and policymakers, the book is divided into four parts that provide the theoretical and practical framework for developing and establishing an intentional and comprehensive senior year experience. Part One defines the term "Senior Year Experience" more completely and "examines the characteristics and needs of

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seniors in light of the impending transition from classroom to the world of work and roles other than ‘student’” (xv); Part Two describes both curricular and cocurricular themes in senior year experience programs and goes into depth about issues such as “how to build a cumulative curriculum to integrate student learning in the senior year and the role of higher education in enhancing seniors’ preparation for professional success beyond the classroom” (79); Part Three focuses on “specific support services for seniors and the roles that certain offices and campus units can play in organizing to address issues related to the senior year” (185); and Part Four provides “practical suggestions for institutionalizing a senior year experience through the vehicles of assessment, incorporation of change theory strategies, and recommendations of the authors for policymaking and program development” (243).

Although relatively dated (the publication date is 1998), the book provides a well-researched rationale for the need to focus on seniors which remains relevant today. The authors cite the following characteristics which motivate the need to consider a Senior Year Experience: (a) Seniors are a captive audience and are not as “at risk” as students in the freshman year; (b) Seniors have high expectations- finishing their degree is a big deal- and we need to deliver on these expectations; (c) Seniors have special needs unique to them as students in transition. They are moving through a time of personal transition, including finishing coursework, applying for graduation, preparing for the future- and need to be provided with specific support and opportunities to cope with this transition (d) Seniors are our last chance to provide students the behavioral and attitudinal skills and competencies necessary to be successful; and (e) Seniors will soon be our alumni and their future participation in the life of the campus is important (5-6). These characteristics, coupled with institutional and societal trends which continue to push institutions of higher education to be more accountable for the quality of their graduates

and the impact that they have on local and national economies, add to the reasons for examining the senior year.

Overall, *The Senior Year Experience: Facilitating Integration, Reflection, Closure, and Transition* may serve as a resource to initiate conversation- either at the Institute or College department level- about whether or not we should examine our senior year experience at Georgia Tech more comprehensively. Given that many of our degree programs already include a senior capstone or design course and a high percentage of our students participate in undergraduate research, cooperative education, and/or study abroad, the academic components of such a comprehensive program already exist. Having students examine and reflect on their overall educational experience as they transition from Tech into the “real world” may be worthwhile.

The CETL Library is located in the CETL Conference Room, Ground Floor of the Administration Building, Room 17. Contact Clint Lyle at 404/894-4474 or clint.lyle@cetl.gatech.edu for access.

The Undergraduate Thesis Option

by **Karen Harwell, Ph.D. & Donna Llewellyn, Ph.D.**
Director, Undergraduate Research & Director, CETL

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History and Process

There has been a sharp increase in the number of undergraduate students participating in research experiences at Georgia Tech. In an attempt to ensure that these students have the opportunity to learn the entire research process – from idea generation through to communicating results, Georgia Tech now offers a thesis option. This is one example of an opportunity for our seniors to bridge their undergraduate educational experience with their future plans, especially for those who wish to attend graduate school.

The Research Option is described in Georgia Tech's SACS Quality Enhancement Plan, Strengthening the Global Competence and Research Experiences of Undergraduate Students. The Research Option grew from a desire to leverage the strengths of our research-intensive university and to provide a unique opportunity for undergraduates to work with faculty on longer-term research projects culminating in a thesis. The program is designed so that a student can pursue a “coherent program of research study and experience.”

In this section, we outline the general requirements for the Research Option. Later in the newsletter, we offer some tips for faculty mentors and their students. For additional details, please visit

the Research Option website at:

http://undergradresearch.gatech.edu/research_option/

The exact requirements for the research option vary across academic units, however, students typically do the following:

- Complete at least 9 units of undergraduate research
- Take courses that span at least two, preferably three terms
- Engage in research for either credit or pay (audit hours must be taken)
- Take at least 6 of the 9 required hours on the same topic as the thesis
- Complete a research proposal outlining their research topic and project for the thesis
- Write an undergraduate thesis/report of research on their findings
- Take the class LCC 4700 “Writing an Undergraduate Thesis” (taken during the thesis-writing semester).

The research proposal and at least 6 hours of research are required for admission to the LCC 4700 undergraduate thesis course. Completion of the Research Option is noted on the student's transcript.

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Each student interested in the option should first signify their intent to participate by filling out an online intent form (<http://undergradresearch.gatech.edu/studentinterestedinresearchoption.php>). This notifies both the UROP (Undergraduate Research Opportunities Program) office and the undergraduate office in the student's academic major under which the option is being carried out. Several individual schools also have other specialized requirements. It is best for the students to complete the form as early as possible so that the UROP office and the major department can advise them on the correct procedures and pathways.

Students should work early to secure a faculty mentor who will guide them through the preparation of a formal proposal for their research thesis project. Often students do not decide to embark on the research option until they have completed one semester of research. This is perfectly permissible; however, the proposal for the remainder of the research should be crafted before the last two semesters of the research project begin.

LCC 4700 is designed to provide the Research Option student with skills necessary to improve their writing. Subjects covered in the course include quality research proposals, literature reviews, presentation skills, document organization, and writing workshops. Further, the course offers an interdisciplinary forum for discussions of discipline-specific issues including ethics, document styles and sections, and the norms in the different fields.

Suggestions and Feedback from a Few Participants

CETL asked two faculty mentors and three students who have completed the research option for their feedback and advice. Here is what these participants had to say:

Student Question 1 - What was the biggest thing that you learned from the experience of researching and writing a thesis?

Dianne K. Palladino (DKP):

Through the LCC 4700 class, I learned that research methods are very different among different disciplines. Aspects of research that are important to some disciplines are sometimes negligible in others. Since my future direction of research is highly interdisciplinary, this was a valuable lesson in the expectations I should have of researchers from other fields.

Zen Mehra (ZM):

Writing a thesis helps you crystallize your research, and organize your results. A thesis often has a conclusion, and an outline for future work. This helps shape your current experiments, with the objective of having meaningful results in the end, and drawing conclusions that may be used in the future. Although a certain background study is assumed in research, writing a thesis helps put those thoughts down on paper in a much more formal way.

Dmitriy V. Plaks (DVP): Professors reviewing your thesis will always come up with questions or comments that you have never considered before. Expecting the unexpected is an understatement.

Faculty Question 1 - What was the biggest thing that you learned from the experience of assisting a student with researching and writing a thesis?

Julia Kubanek (JK): I learned that given the opportunity to take on a major research project over the course of a few semesters (and given Georgia Tech resources like the LCC course in how to write a thesis and our biology senior seminar course in how to present research to a general scientific audience) that undergraduates at Georgia Tech are capable of completing graduate-level research and getting it published in international journals.

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Alex Orso (AO): My experience with the thesis option confirmed my general experience of working with undergraduate students. To summarize it in one sentence, I learned that undergraduate students are a great resource and that doing research with them, although challenging at times, is extremely rewarding.

Student Question 2 - What was the largest issue that you had to deal with in order to succeed at this task?

(DKP): By the time I reached the opportunity to complete my senior thesis I had several experiments that I was working on. Choosing which one would be my thesis and which ones to save for other publications was probably my largest decision.

(ZM): Research, especially an experimental science, is extremely sensitive to minor process variations which makes it very important to be very careful, and document steps well. Seemingly similar conditions could yield wildly different results, which can at times be frustrating. It is important to realize that even decent results could take their time in showing up.

(DVP): Obtaining data is not always as straightforward as one hopes. Things go wrong at the worst time and having a backup plan is crucial.

Faculty Question 2 - What was the largest issue that you had to deal with in order to help the student succeed at this task?

(JK): Time management that allowed me and my student to keep each other informed throughout the course of the project. Tech students are very busy and independent - but they benefit from regular check-ins with their research advisor to keep their project on track and to deal with unexpected problems. Tech professors are busy too - so a commitment between each advisor-student pair to meet regularly is important.

(AO): One issue was definitely keeping the student from setting unrealistic goals. One of the greatest strengths of undergraduate students is their enthusiasm and optimism. Unfortunately, that sometimes leads them to shoot for the moon and then realize that they cannot accomplish what they had planned. I learned that it is important to set conservative goals, at least at the beginning, to avoid frustration and give the student a sense of accomplishment.

Student Question 3 - Any advice for a student considering pursuing the thesis option?

(DKP): I would advise students to get involved in research as soon as possible so that by the time the thesis is being written it is practically second nature. I would also recommend that students find a research mentor who is willing to let students get as involved as possible in the research process. Students who get the most out of undergraduate research are those who put the most into it, and tend to produce the best papers.

(ZM): Be patient - the average journal paper is the product of months of research by faculty and students who have spent years mastering their art. Meaningful results don't come easy. Take initiative in the lab, even if not expected to do so. Ask post-docs and senior PhD students all you can - they know a lot!

(DVP): The thesis option is a great way to get a taste for graduate school. It gives you a real feel for what it is like to write and defend a thesis.

3 (faculty) - Any advice for a student considering pursuing the thesis option?

(JK): Start doing undergraduate research as soon as you can - as a freshman or sophomore - to get the experience necessary to be ready for the thesis option when you're a senior. Early involvement teaches you what research is all about and gives you valuable lab skills. That way you'll be well qualified to get a PURA award by the time you're a junior, so you can be paid for your efforts and

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immerse yourself in your project for the summer. If you can stay with the same research group throughout your years at Tech, then by your senior year you will have built up a body of work that is similar in depth and scope to that of a graduate student, allowing you to be an author on one or more publications, which look great on your resume.

(AO): If they are interested in doing research, I would encourage them to do it. It can make their undergraduate studies more interesting and make their CV stand out. However, I would also advise them to first make sure they are ready to commit the needed time and effort to the research. With a busy schedule, research projects are often the first thing that gets neglected, and I saw that happening several times.

Student Question 4 - Any advice for a faculty member considering advising a student through a thesis?

(DKP): Faculty members should be willing to take the time to be very critical of the student's thesis, and to provide as much advice as possible, as requested. This is an important learning experience for a student pursuing graduate school, and being too lenient robs the student of this opportunity.

(ZM): Define a problem as narrowly as possible, as undergraduates tend to get overwhelmed working for the first time. Assign a senior PhD student as 'mentor', who they can relate to and ask questions when stuck.

(DVP): Start taking data early. The earlier the better.

Faculty Question 3 - Any advice for a faculty member considering advising a student through a thesis?

(JK): As I mentioned above, meet regularly with each student, to set realistic goals and to help each

student with unexpected problems. If there is a slump in the project, which is inevitable since research never goes exactly as planned, then these regular meetings in which advisors let students know that set-backs are normal can help keep morale high.

(AO): Do it :) Working with an undergraduate student for a semester is typically just enough to get him/her up to speed on the research. The research option gives you more continuity and a better chance to get some substantial result.

Student Question 5 - Any advice for how to improve the thesis option process?

(DKP): It was very obvious to me when attending my LCC 4700 class that some majors prepare students more for research at the undergraduate level than others. I would recommend having a more advanced class for students who have already published a paper or poster so that students can take their research/writing knowledge to the next level.

(ZM): Including visits to labs outside one's major, and a research demo would be a very enriching experience. Guest speakers from academia/research labs in industry would be a plus too.

(DVP): There has been some talk about splitting up the LCC4700 class into the respective departments. I believe this is a bad idea as one of the most important skills gained from the class is communication. Ideas have to be explained clearly to people outside of your field and the LCC4700 class provides the best avenue for it.

Faculty Question 4 - Any advice for how to improve the thesis option process?

(JK): Smooth out issues with the LCC thesis-writing course. This may have already happened, but in the first few semesters in which it was offered, LCC didn't know how many students would

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register and so sections were removed then added then removed... And the requirement that students have their research proposal vetted by the LCC instructor before being allowed to register was not widely known. I think it's better now - but information could still flow more freely between the LCC course managers, thesis students, and their advisors.

(AO): Nothing much off the top of my head. Maybe it would be a nice idea to require students that do the research option to present their work at an undergraduate research symposiums.

Student Question 6 - Any other comments?

(DKP): I am very proud to have been part of one of the first groups to go through the Research Option program. It is wonderful to see the number of students enrolled in the program increase every semester. The one thing I would love to see happen is to have the 'Research Option' designation appear on the diploma. This would help to spread the word to graduate schools that it raises the level of research education experienced by its graduates.

(ZM): None. It's a great program!

(DVP): The thesis writing process has been a great learning experience and I highly recommend it to anyone interested in writing research papers or going to graduate school.

Summary

In closing, the Research Option is a rich new opportunity for our undergraduate students to earn experience in problem-solving, to enhance their communications skills, to deepen their current knowledge of their discipline, and to gain research competence, and research confidence.

Participation Data

Total Participation By Semester

Fall 2006	5
Spring 2007	13
Fall 2007	8
Spring 2008	32

Total Participation Across Units

Biology	14
Psychology	14
CS	10
Chem/BioChem	5
ECE	4
AE	3
BME	3
HTS	2
Physics	1
CM	1
STAC	1

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Faculty Tips from the UROP Office

Literature Review

Faculty should begin early in guiding their student through the basics of a literature review. Ideally this should occur during the student's first semester of research on the topic proposed in the thesis proposal. Past students in the thesis writing course have repeatedly commented that that it would have been much more helpful to their research if they had been given guidance to do this earlier in their research experience - it would have assisted in informing them of past work and placing a context on their own personal research. Courses are offered periodically by the UROP office and the library on topics such as developing a literature review, EndNote citation software, and the use of scholarly databases. Faculty can take advantage of these resources to assist in the literature review portion of the research.

Second Reader

Each student's final thesis must be read and approved by one additional faculty member in the school granting the degree. This individual is referred to as the "2nd reader." It is to the student and mentor's benefit to involve this individual early in the process. Ideally, the 2nd reader should be involved when the proposal is written and should be provided with the opportunity to read an early draft of the final thesis in order to provide suggestions in time for them to be implemented. Second readers should also be given ample time at the end of the semester to review the final product.

Co-mentoring

Realistically we know that most students involved in the Research Option will be working very closely on a day to day basis with the graduate students and post-docs in the laboratory and research group. This is an excellent practice and should be continued, however, it should not replace the ongoing mentorship by the faculty mentor.

Spring 2008 Events

FACULTY DEVELOPMENT SEMINARS

- | | |
|----------------------|---|
| January 27-28 | GTREET: Perspectives on Learning, Teaching, and the Brain
Chris Jernstedt, Professor of Psychological and Brain Sciences, Dartmouth College |
| February 21 | Looking at Learning: How You Fit into the Assessment Picture at Tech
Tris Utshig, CETL & Jonathan Gordan, Office of Assessment |
| March 11 | Celebrating Teaching Day |

OTHER EVENTS

- | | |
|-----------------|--|
| March 25 | Outstanding Teaching Assistant Awards Banquet |
| April 10 | Faculty/Staff Honors Luncheon |
| April 17 | Student Honors Luncheon |

For more information on these and other events, please visit the CETL website at www.cetl.gatech.edu and click on News and Events.

The Classroom

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Georgia Institute of Technology

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Atlanta, GA 30332-0383