The Swanson School of Engineering Summer Reading Packet
For Students Entering Fall 2013 (Term 2141)

Preparing for Success in the First Year and Beyond!
Dear First Year Engineering Student:

On behalf of the First Year Engineering academic advising team in the Swanson School of Engineering, it is my pleasure to extend the warmest welcome to you, the class of 2017! The advising team is looking forward to working with a new class of students this fall term and, in preparation for what will undoubtedly be the most challenging year of your academic career to date, has prepared some materials that we believe will be helpful as you start your engineering studies at Pitt. Firm believers in hitting the ground running, we present you with your first required-reading assignment!

In light of some of the challenges our first year students have experienced in recent years, you will find here a packet of articles that addresses concerns that seem of particular and timely relevance. You will also find several pages of advising from first year engineering students who have come before you.

The upcoming school year will be different from any which you have experienced thus far. You will work harder. You will put in more time. You will have to rely on your classmates for help and for team-earned grades. And for the first time, you will be in class only with others who were equally as gifted academically in high school as you were. The bar, so to speak, has been raised.

But in this endeavor, you will have the support of an academic advisor. I am proud to work with a team of talented, committed people who are interested in your academic success. The onus, however, is on you to commit to the experience and take responsibility for your engineering education. Please read the following articles carefully and consider this exercise the first step toward ensuring a successful freshman year.

On behalf of the First Year Engineering team of advisors, I wish you much success in your first year of college and welcome you to the University of Pittsburgh Swanson School of Engineering!

With warmest regards,

Jill G. Harvey, M.Ed.
Associate Director
Coordinator of Advising
First Year Engineering Program
History and Purpose of Higher Education

What is the purpose of college?
How has higher education evolved throughout its existence?
What is the history of the educational community which I am joining?

Personal Reflection

Why are you enrolling in college?
What are your motivators for studying engineering?

PittStart Reflection

How did last year’s freshman class perform?
How will this academic year differ from previous years?

Strategies for Freshman Success

What experiences will be beneficial to my success?
What are the attributes of successful college students?
How will my relationship with my parents change?

Words of Wisdom

Advice from current SSOE students who found freshman success!
A job offer, a skill set, a higher tolerance?
What does college provide?

By: Kelley Sousa
http://whichwaync.com/2012/07/18/a-job-offer-a-skill-set-a-higher-tolerance-what-does-college-provide/
July 18th, 2012

“I came to learn,” the ideal student says. “I came to party,” the humorist in the crowd answers.

“I’m doing it because everyone in my family has done it,” the student with no direction says. “I’m doing it because no one in my family has done it,” the student with nothing but drive responds.

There does not necessarily need to be a universal purpose to college. Indeed, words like “knowledge” and “skills” so often associated with higher education imply such broad meanings that one could argue it’s impossible to define the goal of an undergraduate degree.

But with tuition costs rising and the job market looking disappointingly bleak for many recent college graduates, evaluating the purpose of higher education is more important than ever.

So what is the reason for going to college? And more specifically, what should a student expect to gain during his or her four years?

To try to answer these questions and others, four people highly involved in higher education weighed in.

Those people –

Steve Ballard, chancellor of East Carolina University
Nicholas Correa, student body president at UNC School of the Arts
Christopher Payne, associate vice chancellor for student affairs at UNC-Chapel Hill
Nancy Gutierrez, dean of the College of Liberal Arts and Sciences at UNC-Charlotte

– provided responses from which arose a number of overarching themes (or in this case, key words).
As seen in the word cloud above, according to the respondents, knowledge was the most important thing students should gain from college. However, skills like problem-solving and character traits like confidence are also crucial.

Perhaps the most interesting finding was the verbs that appeared frequently – give, prepare and change.

Students should feel like college gives them something other than a diploma – whether it’s a technical skill, a job offer, or a greater understanding of the world. They should feel like college prepares them for the twenty-first century economy — be it through information sciences or a psychology degree. And finally, students should feel like college has changed them in a way that demonstrates a marked improvement in their lives.

Of course, this explanation is based on the findings of a word cloud. The story is obviously a much larger one to tell. But provided with some highlights from the interviews, how would you define the importance of a college education? Which side is missing from the debate?

WhichWayNC: What do you believe is the purpose of a college education?  
Steve Ballard: There is a major social value to a college education, which has been viewed to be central to a strong democracy since our founding. Specifically, democracies work best when the voting public is educated and engaged in the issues of the day. An additional social value is to enhance social mobility – a college education has always been central
to our nation's commitment to enabling citizens to improve quality of life. College education is also instrumental to the individual – to provide the opportunity to realize one's dreams, to have the career that one desires, and to be a responsible citizen. A successful college education gives confidence and “power” to the individual in the form of knowledge, skills, competencies and credentials. All are important.

**WWNC: Are there equally valuable alternatives to college?**
Nancy Gutierrez: The short answer is of course. Any individual can be entrepreneurial, can educate his or herself, and be successful in creating a life that's satisfying. The problem is marketing yourself or those alternatives so that others can understand that you are qualified or that you are a viable life partner or whatever else. You don't necessarily need a college education to be engaged and interesting and employable, but it's a credential. Of course there are alternatives, but those alternatives have to be explained.

**WWNC: Is getting a job after graduation the best reflection of a successful college career?**
Christopher Payne: Employment after graduation is only one measure of a successful college career. The ability and desire to engage in productive dialogue, provide service as a member of a larger community, and make a difference in the lives of others are also measures of success as a result of a higher education.

**WWNC: What threatens the purpose of a college education?**
Nicholas Correa: Of course, the ever-rising cost of higher education makes it difficult for many students to attend college. That being said, we as students have to do our part. We are our own worst enemy. Without students who value their education and who are willing to make sacrifices to get as much as they can out of college, students will go to college and waste our resources by just going through the motions. We make our own educational experience by tailoring our selection of college, classes and networks that we feel best prepare us for our future.

Higher education in the United States has come a long way from its colonial roots. The first college undergraduates were headed for the clergy; today's undergraduates are more likely to head for Goldman Sachs—or they are knee deep in a career already. College has evolved from an elite privilege into an essential career resource.

Today's dynamic college system is the fruit of three major developments that span the twentieth century: the diversification of knowledge; the diversification of the student body; and the diversification of delivery.

**Diversity in the Curriculum: There's More to Learn**

The first half of the twentieth century is the story of higher education coming down to earth. College education grew more and more relevant to worldly life, as the traditional liberal arts curriculum gave way to science and vocational training. Universities forged relationships with industry, drawing funding from the private sector and producing an educated workforce in return. By 1950, universities offered a broad array of programs in arts and sciences.

**Colonial Divinity Schools** The first American colleges offered a broad liberal arts curriculum designed to educate young Puritan ministers. These early institutions were established by religious groups to foster the faith. One charter read:

"[S]o that the church of Virginia may be furnished with a seminary of the Ministers of the Gospel, and that the youth may be piously educated in good letters and manners, and that the Christian faith may be propagated..."

But secular life quickly took over. Harvard University, the oldest university in the U.S., graduated about 70% clergymen in the 17th century, 45% in the 18th, and by the latter half of the 19th century, only 10%. James Walker, Harvard's president from 1853 to 1860, lamented the waning influence of divinity: "Now a professor is as much a layman as a lawyer or physician."

**Public Research Universities**

The shift toward secular, practical education was inevitable. Thomas Jefferson was an
early advocate of expanded higher education opportunities. He argued that America's growing democracy needed an educated citizenry and that the growing market economy needed a skilled workforce. His vision came into fruition in 1862, when Abraham Lincoln signed the Morrill Land-Grant Act pledging to "donate Public Lands to the several States and Territories which may provide Colleges for the Benefit of Agriculture and Mechanic Arts."

The Land-Grant Acts of 1862 and 1890 opened the floodgates for the establishment of new universities. Between 1870 and 1897, the number of higher education institutions reached 821, up from 23 in 1800.

These schools were secular institutions built on a practical mandate—to promote agriculture, science, and technology. The traditional liberal arts curriculum grew to include social science, applied sciences such as engineering, and professional training. By the close of the nineteenth century, theology schools represented only 13% of higher education institutions.

**Early Twentieth Century**

During the first half of the twentieth century, the higher education landscape was heavily influenced by economic demands. In the sciences, the focus shifted to fields which directly impacted industrial production—chemistry and physics departments grew to answer the demand for trained scientists and applied research. A well-rounded education became increasingly important for advancement throughout the private sector, which relied on literate, skilled employees.

**Diversity in the Student Body: Opening the Door to Everyone**

By World War II, the variety of academic disciplines available had revolutionized the higher education curriculum. Yet the demographics of higher education remained largely unchanged. Despite the establishment of colleges for women and minorities, higher education remained, by and large, the domain of the upper-class white male. Two postwar developments changed the face of the student population: the G.I. Bill and the affirmative action policies of the Civil Rights era.

**Postwar Education: the GI Bill** To help ease the postwar economy back into normalcy, the federal government passed the GI Bill, which paid for the college education of 8 million returning GIs. A grateful recipient recalled: "[T]he government paid for all expenses; they paid for tuition; they paid for books, and they gave us a magnificent sum of $90 a month for food and housing."

The GI Bill transformed the college student body by removing the major hurdle to higher
education: the cost. Lower socioeconomic groups were finally represented on campus. The number of college students nearly doubled in the 1940s, from 1.5 million in 1940 to 2.7 million in 1950, as veterans swelled the ranks.

The "magic carpet to the Middle Class," as the GI Bill was called, permanently linked higher education and the American Dream. A college degree was now the ticket to a better life. The federal government assumed "a new obligation to assure equality in educational opportunity." This commitment manifested in such measures as the Truman Commission Report, which specified policies for broader participation in higher education. The community college system was born of this legislation.

**Civil Rights and Multiculturalism** The 'universal access to higher education' stipulated in the Truman Report remained an empty ideal for many Americans, however. Merit-based college admissions removed obstacles for less wealthy students, yet minorities continued to endure discrimination. It was not until the Civil Rights era that the ideal of student diversity expanded to include racial as well as socioeconomic factors.

Multiculturalism grew out of a commitment to include underrepresented minorities in higher education, but evolved into a broader recognition that a culturally diverse student body enriched the educational experience for all. In terms of college admissions, this ideal was expressed in affirmative action policies.

Affirmative action was designed to level the playing field for all applicants by instituting special advantages to students who faced a more difficult path to higher education due to a legacy of discrimination. The policy became increasingly controversial towards the close of the twentieth century, and in the 1990s was eliminated in Texas, California, and Washington amid charges of 'reverse discrimination."

Multiculturalism may have subsided from college discourse, but cultural diversity continues to prevail in the student body and in the curriculum.

**Diversity in Instructional Media: The End of the Classroom?**

Technology permeates our daily lives, drives our economy, and increasingly, delivers our higher education. Distance education has grown by leaps and bounds since the first online university was accredited in 1991, growing at an average annual rate of 40 percent through 2002. The Boston-based market research firm Eduventures has estimated that by 2008, one in ten college students will be enrolled in an online degree program.

The impact of online media on higher education cannot be overstated. The online delivery format has made higher education accessible to a population for whom campus-based learning is not an option. Working adults, stay-at-home moms, and rural and internation-
al students have unprecedented access to college programs through the Internet. The average age of college students has soared to 36. About 30 percent of college students participate in online education.

The Virtual Classroom
The virtual classroom uses a diverse array of instructional methods and media to facilitate learning, including 'live' videoconferencing, satellite broadcasts, interactive multimedia presentations, ongoing chat room discussions, and computer exercises and tutorials. Students have a range of visual and auditory learning materials at their fingertips, with 24-hour access to instructional videos and remote databases for research. The U.S. Distance Learning Association defines online education as "The acquisition of knowledge and skills through mediated information and instruction, encompassing all technologies and other forms of distance learning."

Virtual learning has added new diversity to when, where, and how we learn. As a supplement to face-to-face campus instruction, interactive online media allows instructors to accommodate a wider range of learning styles. College education is shifting from a passive listening experience to active, project-based learning facilitated by interactive technology.

"The professor is moving from the sage on the stage to the guide on the side."

--Dr. Joe Boland, director of Georgia Tech's Center for Distance Learning.

The new diversity in educational media parallels developments in the global information economy. Many argue that students who learn online are more adept at conducting business in virtual space. They learn to "access, analyze, process, and communicate information; use information technology tools; work with people from different cultural backgrounds; and engage in continuous, self-directed learning," according to one report. These are crucial skills for a workforce that routinely collaborates with people in remote locations via the Internet; for whom information technology is a job requirement; and who rely on continuous education to stay up to speed.

The New Landscape of Higher Education: Looking Ahead

The American college system has evolved into a provider of rich, relevant training for all adults. Diversity in the curriculum, the student body, and teaching methods have transformed higher education into a flexible resource for students at any stage of life.

What lies ahead? The "post-industrial university," according to one report, will use "rapidly maturing information technologies to build upon the timeless values of scholarship, collegiality, open dialogue, and intellectual integrity." Instruction will become more creative and dynamic, as college educators design new educational formats to engage an increasingly diverse population of learners.

Reflect...

Stop and reflect on what you just read about the history of higher education, and the purpose of attending college.

What is your view on the purpose of a college education?
Why are you enrolling in college?
What are your motivators for studying engineering?

Having a clear vision of why you are here, and where you want to go over the next four years, will help you to be as successful as you can be.
Do you remember the PittStart discussion about average test scores, professor expectations, and the differences between high school and college? The numbers below will give you a peek into the academic profile of the first year students before you, and how they fared once here. After evaluating the numbers below, read on for advice on finding your own academic success.

A Glance at the First Year Engineers of 2012-2013
The New “Average”

The “Average” 2012-2013 Engineering First Year Student had...

A Math SAT Score of 701
A Critical Reading SAT Score of 665
A Total SAT Score of 1356
A High School GPA of 4.07

After the Fall Semester, we had 62 students who were on probation (GPA < 2.0)

- Average Math SAT: 670
- Average Critical Reading SAT: 640
- Average Total SAT: 1310
- Average High School Class Rank: Top 18% of their class**

**of those whose high schools ranked
Of this probation population.....

79% Men, 21% Women

81% were from PA, 16% were from out of state, 3% were international students

5% started at Pitt in PreCalculus, 95% started in Calculus 1 or above

Of ALL students...

32 students had 4.0 at the end of the fall term

15 students still had 4.0 at the end of the spring term

It is MUCH harder to get a 4.0 in college than it is to get a 4.0 in high school.

The good news is that, at the end of the freshman year...

160 students earned honors designation at the end of the fall term (31%)

142 students earned honors designation at the end of the spring term (28%)

106 students achieved honors in both the first and second terms of their freshman year (21%)

What does this all mean?

These statistics have been compiled by the Academic Advising team not to scare students, but rather to show them that the Swanson School of Engineering attracts highly accomplished students. Setting yourself apart in the classroom is much more difficult and much more time consuming than in high school since the “average” college student at Pitt is of a higher caliber than the “average” high school student.

The students who struggle their first year may never have struggled before academically in their entire life. There is a tendency for first year engineers to enter the University with the mindset that failure can’t and won’t happen to them, because it never has before. But in the last academic year, we dismissed students for poor academic performance with Math SAT scores of 720 and class ranks in the top 11%. These students likely entered college with the motivation to be at Pitt and study engineering, but were unable to translate that into success in the classroom.

Students should not be afraid to ask for help and assistance in their classes if they feel intervention is necessary. As Academic Advisors, we encourage all students to be proactive in looking for academic assistance at the first sign of difficulty.

Read on for advice on how to achieve success in the first year and beyond...!
Reflection: Achieving First Year Success

My biggest challenge freshman year was finding the proper study habits so I could do well on exams. Going into my first set of exams I used my old high school habits, ignoring all the advice given to me, and waited for the night before to do my studying. I thought that everything I had learned was basic information so my natural instinct was to take the basic approach. I learned the hard way that this approach was not the proper method. I was hit so hard by this fact I was considering transferring out of the engineering department because it was such a shock to me. I decided instead, that it was time to grow up and find my own way to properly study. After receiving the grades from my first round of exams, I decided I would open my notes every night and study each subject for at least 10-20 minutes in Alumni Hall.

I also decided I would need to be more thorough in my reading of my textbooks because the notes were not enough, so I closely examined example problems and did them on my own, only looking at the solutions after completing the problem. I also decided that I should practice problems much more often. I did many more practice problems out of the book than were assigned in order to gain a mastery of the information. Finally the biggest and hardest step of all was meeting with professors during office hours. It was an intimidating feeling because I felt they would just try and belittle me and tell me to figure it out on my own, but they are an excellent source of help and encouragement. Going into my second round of exams I felt much more confident and comfortable with the test material and my efforts paid off because I saw great improvements in my exam scores.

When it comes to test preparation, every day is preparation for the exam. It is not enough to start studying for exam a week or two before it happens. I found that it was much more productive to sit down every day and examine my notes, the book, and any other helpful aids. It also helps to find a group of people within classes to study with because if one person doesn’t understand the material, there will always be at least one person that can help explain the material. Being able to explain material to another is a clear display of one’s mastery of the material.
Reflection: Achieving First Year Success

That huge book you bought for this class? Learn to use it, and learn to love it! It WILL help you study if you use it correctly. Do all of the problems that are worked out in the chapter, even if you don't understand the material yet: that's how you'll understand it - by seeing it applied.

And when you can't do the problem, read the solution and try again the next day.

Miriam Rathbun
Engineering Science
Monroeville, PA

1) ACTUALLY DO WORK. This isn't high school. I've seen a lot of smart people get demolished first semester because they had a big head. Go to lecture. Do the homework.

2) GO TO OFFICE HOURS. Your professors are EXTREMELY helpful, and if they know how hard you work, they might just bump you up if you're hanging on the edge of a better grade.

3) Make use of online learning supplements for your intro classes. Khan Academy, PatrickJMT, and Virens Videos are all extremely useful supplements to lecture. They only cover basic concepts though, so make sure to still go to lecture!
Reflection: Achieving First Year Success

Don't underestimate the power of another twenty minutes of studying. It can go a long way every day.

Chris Antosz
Chemical Engineering
South Park, PA

Emma Raszmann
Electrical Engineering
Milton, MA

1. If you don't understand something in class, don't be afraid to talk to a TA or your professor in office hours! They are all resources for you. If their office hours don't work for you, the MAC, Physics resource center, Fishbowl, and ARC are great resources for any questions, too.

2. A lot of engineering students have already taken advanced calculus, physics, and chemistry in high school. An IB/AP class may not always measure up to the difficulty of a college class. Teachers or professors teach every class differently, especially between high school to college levels. Any class you already took in high school may not be an easy A for you at Pitt.
Why Students Go to College Matters to Their Success
By Caralee Adams on April 26, 2013

For many young people today, going to college is expected. Having some postsecondary training is almost a prerequisite for entering the middle class.

When researchers dig a little deeper and ask students exactly why they want to pursue higher education, though, they discover a variety of answers about motivation that can help colleges better support students to completion.

A new study by University of Rochester researchers examines the reasons for attending college and the impact that motivation can have on academic outcomes. It found that students are more likely to earn higher grades and get a degree if enrolling was motivated by intrinsic needs for autonomy and competence.

While it is important for students to build social connections on campus if they are to persist, when students placed a high priority on meeting and interacting with peers they were not as likely to succeed. "Students who emphasized relationships with peers as their motivation for attending college may have done so at the expense of the time they devoted to academics," according to the study. The researchers reported this was especially true for male students. When counselors realize this, they can encourage a balance of work and socializing, the student suggests.

Just how motivation impacts students varies among socioeconomic groups. Autonomy was more important to the success of higher socioeconomic status students than to that of lower SES students. Low-income students were more likely to seek a college degree to improve their financial situation than their wealthier counterparts. The research suggests advisers who are aware of this could reinforce the economic benefit of good performance in school when working with these students.

The study also indicates that going to college to in hopes of forming relationships with faculty and staff was positively associated with a higher GPA.

The researchers suggest that these findings have important implications for student and academic affairs practices. For instance, students who are going to college in large
part to connect with faculty and staff can be given strategies for forming and maintaining those relationships when counselors are aware.

To reach these conclusions, researchers analyzed web-based surveys of 2,520 students at a large, unnamed community college and an unnamed liberal arts college located in a rural area in the Northeast.

why_students_go_to_college_matters_to_their_success.html
Advice for Smart Students on Succeeding in College
By Lionel Anderson

Lionel Anderson is the assistant director of the office of academic resources at Haverford College and an active board member of TeenSHARP, a nonprofit college preparatory program.

In my work, I’ve found there to be an enormous, though perfectly absurd, pressure for smart teenagers to appear smart, autonomous and academically self-sufficient at all times. So often, the attitude among high-achieving students is that they must be capable of independently surmounting nearly everything set before them. And nothing, in their minds, diminishes this veneer like asking for help — especially when so many of them have never needed it before.

Therein lies a maddening irony: our top colleges and universities expend unimaginable sums of money per student to supply the very best academic resources American higher education has to offer while admitting scores of students who — by virtue of their own presumption or, in some cases, the dominant peer culture — regard using said resources as an indication of deficiency.

For years, teachers, guidance counselors and loved ones have made so much of how brilliant, creative and gifted you are that it will be very easy for you to overlook or, worse, look askance at the people stationed to propel you even further once you arrive on campus.

Those hired to guide you through the unknown or to cleverly enhance what you already know are awaiting you eagerly, hoping you will give them the chance to do so. College, by design, will present teaching models, curriculums and an academic culture that will require you to court the unfamiliar.

As you learn what is required to be successful during this phase of your education, identifying and marshaling your resources promptly and effectively will teach you the value of collaboration.

Enhance Your Own Educational Experience
Many of you, of course, will breeze through any and all course work with little assistance. But in the long term, resources with less immediate connection to your G.P.A. are equally important and will serve you far better if you start taking advantage of them now.
Here are a few ways to enhance your educational experience once you are settled in:

- **Seek mentors who will help you achieve your postgraduate goals.** The pursuit of research prizes and scholarships, as well as graduate school, ought not to begin frantically in the fall of senior year. Find out who is tasked with guiding you toward Fulbright, Marshall, Rhodes and other fellowships.

- **Find someone who will work with you meaningfully in your professional development.** Whether you spend them volunteering, interning or making discoveries in a lab, you will want your college summers to be high impact. Accordingly, you should begin flirting with the arts of networking, interviewing, composing cover letters and professional e-mails, and so on, no later than your second year of college.

- **Study abroad.** Few undergraduate experiences will broaden your appreciation for diverse intellectual and cultural traditions, teach you independence and distinguish your evolving résumé like participating in and studying another culture. Find out who oversees the pre-departure phases of studying abroad.

**Take Advantage of On-Campus Resources**

It also behooves you, academic performance notwithstanding, to align yourself early on with advisers, librarians and the writing center.

Meeting one-on-one with or serving as a peer tutor in mathematics, the natural sciences or a foreign language sharpens understanding for both the tutee and the tutor, and allows for a level of inquiry often shied away from in the classroom.

If you have a learning disability, take full and consistent advantage of every accommodation to which you are legally entitled.

**Natural Intelligence Is No Substitute for Hard Work**

What I hope to remind you of is that college is not an arena to affirm how brilliant you are. Oftentimes it will not. It is, rather, a space for you to discern new challenges and gain an appreciation for how much you, in fact, do not know.

In this process, you will deepen your capacity for learning while accumulating a range of tools and instincts with which you can apply your brilliance. Natural intelligence is not a
substitute for hard work, and hard work should not be devalued when combined with tutoring, mentoring or any of the other skill-building services at your disposal.

Whether you’re on your way to college or already enrolled, if you’re willing to invite others into your process of scholarly growth, you will discover rich opportunities to hone your research skills, produce original scholarship, become digitally literate, write, speak publicly and nourish your pre-professional identity. Hopefully, in doing so, you will discover that success in college and beyond can and should be collaborative.
The Five Greatest Predictors of Student Success

Tim Elmore
http://growingleaders.com/blog/student-success/
January 11, 2013

Educators have focused on helping students through transitions for years now. You know what I mean, don’t you? Transitions like...

From elementary school to middle school...
From middle school to high school...
From high school to college...
From college to career (or in some cases, back to their parent’s basement).

Far too often, we’ve focused on predictors such as Grade Point Average or SAT scores. We figure if a kid is smart—they’ll stay in school and continue to be engaged in class. It made sense to us.
Today we’re realizing those are not the most significant categories to measure.

According to First Year Experience programs and our work with over 6,000 schools and organizations worldwide, we have reduced the list of highest predictors of student success (meaning engagement, excellent performance and satisfaction) to what we call the “Big Five.” The “Big Five” are quite simple. When a student experiences these five realities they are most likely to graduate and excel in life:
1. Getting connected to the right people.

For years the National Survey of Student Engagement (NSSE) has confirmed the importance of close, accountable relationships in student success. We continue to find that students who fail to graduate or succeed in school are ones who fail to engage with others outside of class or don't get involved with activities involving new people. They get stuck and then don't have a support system to make them want to continue. They also have no accountability strong enough to prevent them from quitting. Research shows that when students get connected to solid people (peers or mentors) they tend to stick with commitments and follow through. The Federal Mentoring Council shares one study of the Big Brothers Big Sisters program found students with mentors earning higher grades than similar students without mentors. A 2007 study discovered that kids in a mentoring relationship at school did better work in class, finished more assigned work, and improved overall in academics—especially in science and in written and oral communication. After graduation, “employees who have had mentors typically earn thousands more than employees who haven’t.” Those people act as “guardrails” preventing youth from shifting or drifting from their course.

History indicates that people intuitively understood the importance of connectedness with accountability, but we have migrated into a more individualistic lifestyle in recent times. Today we have connectedness (often on Facebook) without accountability. Victor Hugo was a brilliant writer, but very distracted. It took him seventeen years to finish Les Miserables. His solution? He asked his servant to take his clothes while he was sleeping. This forced him to stay in his room…and write. This guardrail enabled him to finish Les Miserables—and the world has benefited greatly. Today, students need these guardrails.

2. Possessing adaptability and resilience.

There is a growing body of research in the last decade suggesting that adults have created a fragile population of children. Because parents or teachers have not demanded they overcome adversity or we've not leveled consequences to their behavior, kids often become brittle young adults, unable to cope with the demands of life. You can imagine a student like this has trouble with transitions and the hardship of adapting to new situations.

Let me illustrate this drift:
- In 2006, 60% of students moved back home after finishing college. In 2010, that number had risen to 80%. It’s more than a bad economy. They’re not career-ready.
- Condoleezza Rice and Joel Klein report three out of four teens aren't even fit to serve in the military due to obesity, failure to graduate high school or their criminal records.
- The MacArthur Foundation funded a research project that said for many kids, the transition into adulthood doesn’t occur until 34 years of age.
I don't believe this stall in students is because they're unintelligent or bad kids. I believe we’ve failed to prepare them to cope with demands. We somehow felt that self-esteem meant we should affirm them consistently and prevent them from falling or failing. Sadly, this has had the opposite effect. We have risked too little, we have rescued too quickly and we have raved to easily about our kids—and now they find it hard to navigate transitions. Adaptability and resilience are priceless possessions that predict success far more than good grades and high SAT scores.

3. Developing high emotional intelligence.

You know this already. Forty years ago, educators frequently believed that the kid with the highest IQ would do the best, and later become the most successful. Now, it appears it’s more about EQ than IQ. If a student has high self-awareness, self-management, social awareness and relationship management, they’re more likely to graduate, excel and become a leader. It’s more about life skills and soft skills than memorizing lectures and taking exams. The concept of emotional intelligence has proven to be so influential, that it’s now inculcated the planning of educators. For example, policy makers in one state are using school programs to cultivate emotional intelligence and social intelligence in order to prevent crime, increase mental health, deepen student engagement and lower unemployment. In Georgia and Nebraska, we’ve begun working with the department of education to create curriculum that will spark conversations about these soft skills to not only increase graduation rates but make kids employable when they do graduate.

Quite frankly, the reason emotional intelligence has become such a large factor in student success is that kids today struggle more with mental health issues than they did forty years ago. This, in turn, leads to poor performance and high dropout rates. Research in education and psychology now shows the benefits of Social Emotional Learning (SEL) programs for children as young as preschoolers. Public awareness is catching up to the research. A *New York Times* editorial reviewed key research findings, saying, “...social and emotional learning programs significantly improve students’ academic performance.” Additional studies also show emotional intelligence is strongly linked to staying in school, avoiding risk behaviors, and improving health, happiness, and life success.

4. Targeting a clear outcome.

This one should be obvious. Whenever a student enters school (high school or college) with a clear goal, they are more likely to stay engaged and finish well. I believe it’s the primary difference between school and sports...or for that matter: work and sports. We love sports in America because it’s often the one place where the goal is clear. Every football field has an end zone; every basketball court has a rim and backboard. We know
what the score is and it energizes us. For many, both school and work represent places where we endure the drudgery and eventually disengage.

A university study conducted on “peace of mind” sought to find the greatest factors that contributed to people’s stability. The top five they discovered were:

Refusing to live in the past.
The absence of suspicion, resentment and regret.
Not wasting time and energy fighting conditions you cannot change.
Refusing to indulge in self-pity.
Forcing yourself to get involved with a major goal in your current world.

When author Dan Pink researched what motivates both students and adults at the highest level, he concluded it could be summarized in three elements:

1. Autonomy – The student worked at their pace and created their future.
2. Mastery – The student believed they were growing and improving.
3. Purpose – The student worked on a goal they felt was meaningful.

5. Making good decisions.

This one is almost predictable. The students who succeed make right decisions in and out of class. These are decisions that determine their moral compass, their discretionary time, their study habits, their predisposition to cheat, their outside work and how they deal with setbacks and stress. All of these can be pivotal in determining whether a kid succeeds or surrenders. Like us, students must keep a clear objective in mind. May I illustrate?

The team who created the popular game Angry Birds spent eight years and almost all their money on more than fifty games before their big success occurred. By 2012, Pinterest was among the fastest-growing websites ever, but it had struggled for some time. In CEO Ben Silbermann's words, it had “catastrophically small numbers” for a year. He said “if he had listened to popular startup advice he probably would have quit.” James Dyson went through 5,126 prototypes before arriving at his “revolutionary vacuum cleaner.” We all know Thomas Edison failed 10,000 times at inventing the light bulb. The popular company Groupon nearly went out of business—but went on to a “meteoric rise.” And do you know where WD-40’s name came from? It literally means “Water Displacement—40th Attempt.”

Somebody kept a clear goal in mind. So must students.

10 Things Students Need to Know About College (but Don't)

Lynn F. Jacobs & Jeremy S. Hyman U.S. News and World Report


March 11, 2009

Many students have already begun to receive, or shortly will get, their college acceptance letters. There's a wealth of information contained in those thick envelopes—or, more likely these days, text messages, videos, or goody bags. But some of the really important stuff is almost never told: secrets of college to be discovered (or not) by the select few who can see behind the curtain. And so this week, to those newly admitted or shortly to be admitted to the college of their choice, we offer our congratulations—and the 10 things you really ought to know about where you're going:

1. **You're in charge of this thing.** For most students, the biggest difference between high school and college is that there’s no one there to hold your hand. Picking courses, getting to class, doing the reading, and figuring out what's expected on the papers are all things you're going to have to do mostly on your own. Sure, there are profs and TAs who'll give you suggestions and tips. But when it's 25 degrees outside, you're the one who's going to have to take responsibility for hauling your a-- out of bed and getting it to the auditorium.

2. **Your parents might not be a help.** Even students who are closest to their parents will find amazing the transformation that occurs when your slightly over-involved parent becomes a low-flying helicopter parent. Maybe he or she is worried about you, takes vicarious pleasure in going back to college with you, or just has nothing to do all day with you out of the house. Whatever the reason, your well-intentioned parent can lead you astray. Colleges today are different—and in many cases much improved—from what they were 25 years ago, and professors' expectations have changed accordingly. Your parents aren't (in most cases) experts in the fields you're studying. And, most important, the professor wants things done the way he or she wants them done. Suggestion: Turn down (or tune out) your folks.

3. **Two thirds of the work is done at home.** When you get to college, you might be quite awed by the large lecture halls and the well-spoken faculty. And you might conclude that the material done in lecture sessions is all you need to know and, as long as you make it to class, everything will be 100 percent. But, unlike many high school teachers, college
professors expect you to prepare for each class, to review the material periodically on your own, and to spend large amounts of time studying for the tests and writing the papers. Rule of thumb: two hours of on-your-own work for every hour of lecture. Put another way: 15 hours of lecture weekly, 30 hours of work at home weekly. (Think about it.)

4. **A C is a bad grade, really.** Many students come into college thinking if they get only a C in all their classes, they’re doing just fine. Or at least adequately. But these folks should know that in many courses the grade distribution is 20 percent to 30 percent A’s, 30 percent to 60 percent B’s, and only 15 percent to 20 percent C’s. In many universities (not just elite private colleges but also large state universities), the average GPA for all courses is 3.15 (that is B/B+). Set your sights—and work at college—accordingly.

5. **It's the product that counts.** Many students come in thinking that effort is what counts most. That’s why, when they get a bad grade, they go to the professor trumpeting how many hours they worked, how many sources they considered, and how they made it to all the classes. But in college, what counts is the product—the paper (not how it was produced), the test (not how much you studied for it), and the presentation (not how much you knew about the subject but couldn't quite get out). Kind of like the real world.

6. **No amount of practice is too much.** Especially in skills-based courses—like math, languages, and sciences—students often think that if they’ve done the assigned problem set or translation homework, they’re home free. But really, that’s just the required work—the minimum the prof thinks he or she can reasonably assign for that week. If you want to do really well in such courses, you should apply the concepts, techniques, and methods to additional problems and exercises—often available in the back of the book, from the prof or TA, or even on the course Web page.

7. **Understanding is not just memorizing.** Many intro courses have some amount of memorizing: vocabulary in foreign languages, theorems in math, names and dates in history. But professors regard these as just the "common currency" that all students will have mastered before they do the real work of the course. That's why on the test, you'll usually find some IDs, some short answers, some true-false—and some essays. These essays typically require you not just to regurgitate what you've memorized from the lecture or textbook but to do some analysis, apply the concepts to some new cases, or organize the material in some new or interesting way. Pretty different from what you might be used to.
8. **Content is doled out in large units.** In your daily life, circa 2009, content comes at you in shorter and shorter units: first, books and magazines, then Web articles, then YouTube videos, then IM-ing, then Twitter. Unfortunately, professors, textbooks, and articles aren't yet on the bandwagon. A typical college lecture lasts much longer than a cellphone video clip; a textbook chapter or journal article is way longer (and more complex) than a blog post. Bottom line: You've got to adjust your focus from bursts of content to sustained arguments. And retrain your attention span to process long—very long, it'll seem—units of content.

9. **You need not major on the first day.** Though in many schools there's tremendous pressure to declare a major right when you come in—owing to shortage of places in classes, a desire to start on a career path, or the hope of finishing in a finite number of years—we steadfastly maintain that it's best for most students not to pick a major until they have taken at least three or four courses in the field (including at least one or two advanced or upper-division courses). You won't know what the field is until you've worked in it for a while, and if you make a wrong choice or two, you've guaranteed yourself a stay in college past 2015.

10. **The profs are on your side and want to help.** Though it's not obvious at many of the mega-universities (and even many of the small, fancy colleges), the professor would like to see you succeed and is even willing to help you do so. Try to meet with each professor one-on-one away from the lecture. Every college professor is contractually required to spend two to four hours a week sitting in his or her office helping students with their work. Make use of this single most underutilized college resource. And if there are small section meetings or review sessions before the test, take the opportunity to use these to ask what you most want to know about. Sort of like a presidential press conference with you being the reporter.

## Major Difference Between High School and College

<table>
<thead>
<tr>
<th><strong>HIGH SCHOOL</strong></th>
<th><strong>COLLEGE</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Teacher/ Student contact:</strong> Contact closer and more frequent (five days a week).</td>
<td><strong>Teacher/ Student contact:</strong> Faculty is available during office hours (a few hours a week) and by appointment to address students’ concerns.</td>
</tr>
<tr>
<td><strong>Competition/ Grades:</strong> Academic competition is not as strong, good grades can often be obtained with minimum effort.</td>
<td><strong>Competition/ Grades:</strong> Academic competition is much stronger, minimum effort may produce poor grades.</td>
</tr>
<tr>
<td><strong>Status:</strong> Students establish a personal status in academic and social activities based on family and community factors.</td>
<td><strong>Status:</strong> Students can build their status as they wish, high school status can be repeated or changed.</td>
</tr>
<tr>
<td><strong>Counseling/Dependence:</strong> Students can rely on parents, teachers and counselors to help make decisions and give advice. Students must abide by parents boundaries and restrictions.</td>
<td><strong>Counseling/ Dependence:</strong> Students rely on themselves; they see the results of making their own decisions. It is their responsibility to seek advice as needed. Students set their own restrictions.</td>
</tr>
<tr>
<td><strong>Motivation:</strong> Students can get stimulation to achieve or participate from parents, teachers and counselors.</td>
<td><strong>Motivation:</strong> Students apply their own motivation to their work and activities as they wish.</td>
</tr>
<tr>
<td><strong>Freedom:</strong> Students’ freedom is limited. Parents will often help students out of a crisis should one arise.</td>
<td><strong>Freedom:</strong> Students have much more freedom. Students must accept responsibility for their own actions.</td>
</tr>
<tr>
<td><strong>Distractions:</strong> There are distractions from school, but these are partially controlled by school and home.</td>
<td><strong>Distractions:</strong> The opportunity for many distractions exists. Time management to students will become crucially important.</td>
</tr>
<tr>
<td><strong>Value Judgments:</strong> Students often make value judgments based on parental values; thus, many of their value judgments are made for them.</td>
<td><strong>Value Judgments:</strong> Students have the opportunity to see the world through their own eyes and develop their own opinions and values.</td>
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Think you can talk on the phone, send an instant message and read your e-mail all at once? Stanford researchers say even trying may impair your cognitive control.

Attention, multitaskers (if you can pay attention, that is): Your brain may be in trouble.

People who are regularly bombarded with several streams of electronic information do not pay attention, control their memory or switch from one job to another as well as those who prefer to complete one task at a time, a group of Stanford researchers has found.

High-tech jugglers are everywhere – keeping up several e-mail and instant message conversations at once, text messaging while watching television and jumping from one website to another while plowing through homework assignments.

But after putting about 100 students through a series of three tests, the researchers realized those heavy media multitaskers are paying a big mental price.

"They're suckers for irrelevancy," said communication Professor Clifford Nass, one of the researchers whose findings are published in the Aug. 24 edition of the Proceedings of the National Academy of Sciences. "Everything distracts them."

Social scientists have long assumed that it's impossible to process more than one string of information at a time. The brain just can't do it. But many researchers have guessed that people who appear to multitask must have superb control over what they think about and what they pay attention to.

Is there a gift?

So Nass and his colleagues, Eyal Ophir and Anthony Wagner, set out to learn what gives multitaskers their edge. What is their gift?

"We kept looking for what they're better at, and we didn't find it," said Ophir, the study's lead author and a researcher in Stanford's Communication Between Humans and Interactive Media Lab.

In each of their tests, the researchers split their subjects into two groups: those who regularly do a lot of media multitasking and those who don't.

In one experiment, the groups were shown sets of two red rectangles alone or surrounded by two, four or six blue rectangles. Each configuration was flashed twice, and the participants had to determine whether the two red rectangles in the second frame were in a different position than in the first frame.
They were told to ignore the blue rectangles, and the low multitaskers had no problem doing that. But the high multitaskers were constantly distracted by the irrelevant blue images. Their performance was horrible.

Because the high multitaskers showed they couldn’t ignore things, the researchers figured they were better at storing and organizing information. Maybe they had better memories.

The second test proved that theory wrong. After being shown sequences of alphabetical letters, the high multitaskers did a lousy job at remembering when a letter was making a repeat appearance.

"The low multitaskers did great," Ophir said. "The high multitaskers were doing worse and worse the further they went along because they kept seeing more letters and had difficulty keeping them sorted in their brains."

**Still puzzled?**

Puzzled but not yet stumped on why the heavy multitaskers weren't performing well, the researchers conducted a third test. If the heavy multitaskers couldn't filter out irrelevant information or organize their memories, perhaps they excelled at switching from one thing to another faster and better than anyone else.

Wrong again, the study found.

The test subjects were shown images of letters and numbers at the same time and instructed what to focus on. When they were told to pay attention to numbers, they had to determine if the digits were even or odd. When told to concentrate on letters, they had to say whether they were vowels or consonants.

Again, the heavy multitaskers underperformed the light multitaskers.

"They couldn't help thinking about the task they weren't doing," Ophir said. "The high multitaskers are always drawing from all the information in front of them. They can't keep things separate in their minds."

The researchers are still studying whether chronic media multitaskers are born with an inability to concentrate or are damaging their cognitive control by willingly taking in so much at once. But they're convinced the minds of multitaskers are not working as well as they could.

"When they're in situations where there are multiple sources of information coming from the external world or emerging out of memory, they're not able to filter out what's not relevant to their current goal," said Wagner, an associate professor of psychology. "That failure to filter means they’re slowed down by that irrelevant information."

So maybe it's time to stop e-mailing if you're following the game on TV, and rethink singing along with the radio if you're reading the latest news online. By doing less, you might accomplish more!
One of the most exciting things about starting college is finally being able to make your own decisions—no family rules to heed or break. But then it turns out that being responsible means you're the only one to blame when things go wrong, and suddenly independence doesn't seem all that great. This week, visiting blogger Marjorie Savage, parent program director at the University of Minnesota and author of You're on Your Own (But I’m Here If You Need Me) offers 10 tips for college students as they figure out a new relationship with their family:

1. **Keep in touch.** With all the technology out there—E-mail, texting, Skype, Facebook, Twitter—your parents don’t just have the tools to talk to you every day, they can even see you. And if they paid for your phone and laptop, they probably expect you to use those gifts to contact them at least occasionally. Texting and E-mailing are ideal for checking in quickly without facing a lengthy conversation. The once-a-week or twice-a-month phone calls, though, are helpful for keeping up with what’s happening at home and letting your parents know you’re still thinking about them.

2. **Set the rules.** If you "friend" your parents on Facebook, Twitter, or some other site, they will not feel like they need to hear from you as often. And a positive outcome of friending your parents is that you are less likely to carelessly post something you will later regret. Of course, that also means they can see all the photos and updates that your friends see. It’s OK to work out ground rules, like "I don’t mind you reading my page, but no messages on my wall, and don’t ever tag me in a family photo."

3. **Combat homesickness.** Almost everyone gets homesick at some point. It might not even be your mother or father that you miss most: There's just something to be said for your own bed, the family dog, a fully stocked refrigerator, and people who know your name without having to look at the sign on your door. But no matter how tempted you are to head home for the weekend—or drop out completely—remember that college is what you’ve been waiting for. Open a book, talk to the kid across the hall, or check out one of those student organizations everyone is talking about. If you keep busy, you won't have time to be homesick.

4. **Give 'em a heads-up.** Eventually you will go home, maybe for your high school homecoming or a holiday. Before you go, tell your parents if there's anything new and different about you. The worst time to announce that you’re now a vegetarian is when your mother is carving the Thanksgiving turkey. And ask your family if anything has changed at home. You should get fair warning if your bedroom is now your dad's office or the new guest room.
5. **Strut your stuff.** You have the power to withhold your academic records from your parents: As a college student, your records belong to you, and you get to decide who can see them. Don't overplay this card, though. You'll probably be happy to show them your A's, but even if your grades are not what you hoped, it makes sense to tell your family and let them know what you're doing about it. If your parents are paying some or all of your expenses, they deserve to know how you're using their investment.

6. **Don't bite the hand that feeds you.** Another point about money: You will have the power to make decisions that could affect your parents' finance. If you sign a lease for a luxury apartment, lose your "good student auto insurance discount" because you failed a class, or initiate immediate student loan repayment by dropping too many classes, someone is going to have to pay. Think before you act, and talk to your parents about potential pitfalls.

7. **Take responsibility for the little problems.** If you don't get along with your roommate or if you overspent your budget, it's not your parents' fault. You can tell them what's bothering you, but assure them that you can handle things—and then do just that. If you show them you can take care of the small problems, they will trust you to take increasing responsibility.

8. **But deal your parents in on the big ones.** If you find yourself in serious trouble, tell your parents what happened. If possible, have some ideas in mind for what you can do about it. And consider how you can avoid the same problem in the future. Never ask or allow your parents to contact a professor, an administrator, or the judicial affairs officer about your bad grades or bad behavior. Colleges actually provide the most supportive atmosphere you're ever going to find for solving problems, and threatening to have your parents sue the college or call the provost is not going to help your case.

9. **Find your own way.** Respect your family's values, but be willing to explore your own. In college, you will probably meet people with very different politics, religious practices, and sexual experiences than yours, and you may find that they're your greatest friends. Parents don't always like it when their children change or challenge the family beliefs. Reassure your family that you respect the way you were raised but tell them that you are at a point where you need to examine how the beliefs you were taught fit into your own life experiences. That's how your values become your own.

10. **Give thanks.** Every now and then, tell your parents you appreciate them. Be bold—say, "I love you." They need to hear that sometimes.
Words of Wisdom for Success from past First Year Engineers!

Peer advisors are not the only current engineering students ready to assist with your transition from high school to college. The following pages include advice and words of wisdom from those who were just in your shoes. Once you arrive on campus, continue learning from the more experienced students by getting to know them personally.

Joshua George
Bioengineering
Media, PA
As a new college freshman, you’ll have a lot more free time to do what you want. My biggest piece of advice would be to make sure you schedule when you go out and when you study and don’t leave yourself only a few hours to study for important tests.

Kristin Osinski
Chemical Engineering
McKean, PA
You have to personally establish your priorities. My grades were my top priority. My personal tactic was to go to class, get my homework done, and understand it. Once I had that done, I would use any extra time for personal time.

Antonio Deshields
Industrial Engineering
Rockville, MD
If you enjoy the people you’re around, your classes, meeting professors in office hours, and learning more about engineering; you are bound for success. I did all I could to immerse myself in this beast called engineering! I have come out successfully, and so have many of my friends. Good luck, and enjoy your Freshman year. Dive in and explore everything around you.

Joshua Firestone
Material Science Engineering
Dover, PA
Engineering is extremely hard and takes a lot of work but once you start to get the swing of things you can do well, have as much fun as other majors, and enjoy the education you get. They also take very good care of you in the Swanson School of Engineering and do everything they can to support you, you just need to take advantage of all the help that they offer!!!
Kelsey Knox
Chemical Engineering
Pittsburgh PA

Oakland is a great college campus, make sure you take advantage of all the opportunities it offers! Study outside in Schenley Park, try bubble tea from lulus, or eat at pizza at Sorrentos late at night. Oakland is also so close to downtown, south side, and the waterfront, there is so much to explore!

Yung-Sen Lee
Chemical Engineering
Grove City, PA

Words of wisdom: Make friends, obtain connections, and you absolutely need study groups! Do what you love. Play to your strengths!

Macy McCollum
Electrical Engineering
Elkton, MD

Learn the material as it is taught throughout the course. Being able to complete the homework or ace a quiz isn’t always a good indicator of your grasp of the material. You don’t truly know the material until you can teach someone else.

Ben Kisley
Electrical Engineering
Mentor, OH

My biggest challenge freshman year was figuring out how to study. My advice is to study in small, manageable amounts and learn how to manage your time.

Mercedes Hoeft
Industrial Engineering
Franklin, PA

Be smart on the weekends; utilize your time. Take breaks; don’t overwork. If you enroll in the engineering department, do it for yourself. If you don’t have the want or drive for it, you won’t make it! BIG SEMINAR IS KEY!
Laura Kingsley
Chemical Engineering
Chicago, IL

Get over yourself and hit the ground running. You cannot be as successful as you want to be in engineering solely relying on intelligence. The sooner you accept this and act on it, the better off you will be.

Cindy Wong
Bioengineering
Richmond, KY

The first step in getting involved is the hardest; take the first step! My biggest challenge was physics. The class was very fast paced and different from any high school class.

Nathan Smialek
Bioengineering
Girard, PA

Try to keep order in your life, if you ran at home or did an activity try to do it here. There are a lot of people that enjoy the same thing as you on campus; it’s not hard to find a group with similar interests. Your life will change so much it is very important to have activities that give you a sense of normalcy.

Niall Pascal
Electrical Engineering
Burlington, NJ

I would suggest to any prospective engineers that they work very hard, especially if they’ve received a scholarship. Engineering is full of some of the brightest students at Pitt. It is very common for freshmen engineers to be overconfident when they first arrive.

Kathryn Vasinko
Chemical Engineering
Latrobe, PA

When you step foot on campus as a freshman engineer don’t take how smart you are for granted. You are smart that is why you are here now take the opportunities Pitt presents to you and put 110% effort into everything to achieve all the goals you have for your college career. Although it is a lot of hard work, it will pay off in the end.
Matthew Sykes  
Industrial Engineering  
South Park, PA

Find a great group of friends, engineers of course, and a great place on campus where you can get work done. It’s tough to survive the first year alone, so find a group of friends and make it through together. It’s a great experience and really helps to facilitate learning. I suggest finding a room in Cathy, it worked for me. Also, I highly suggest using all of the academic resource centers we offer here at Pitt, such as the MAC and the Physics Resource Room.

Lauren Hapach  
Bioengineering  
New Brighton, PA

Don’t get discouraged when things get tough! Make goals! Adjusting to college level course work is a big challenge! Join a club to network and meet upper class students.

Jann Grovogui  
Materials Science Engineering  
Baltimore MD

Take the time to think about what department you choose. Seminar helps a lot. I came in completely undecided and after listening to all the seminar lectures and going to all the department tours (even the optional ones) I was able to make a very confident decision about what department I wanted to be in. Just keep your mind open and go to seminar.

Zachary Smith  
Electrical Engineering  
Perryopolis, PA

Make as many friends as you can. I have met some of my best friends while in college. For Freshman Engineering Students: Join the wonderful EXCEL group! Trust me; it’s the best choice I’ve made so far in my college life.

Kaushik Kannan  
Electrical Engineering  
Flower Mound, TX

The first month will be an adjustment period. Classes may seem overwhelming and the college life may reveal inconveniences that you have never had to deal with before. The key is to be open to change and be willing to work hard; things will fall in to place.
Now that you have checked out the Summer Reading Packet, you have an idea of what to expect upon arrival at the University of Pittsburgh! We hope you experienced self-discovery and excitement as you reflected upon your PittStart experience and your goals for freshman year. We are looking forward to welcoming you to the Swanson School of Engineering at First Year Engineering Orientation on the morning of August 23rd. You will receive time/location information via Pitt email closer to that date.

Best Regards,
First Year Engineering Advising Team

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**BONUS POINTS**

This reading packet is just the beginning of your reflections and explorations as a college student. To continue your journey of self exploration and inquiry into the field of engineering and college success, here are some suggestions for further exploration:

- Lifeduringcollege.com
- *Stuff You Don’t Learn in Engineering School, Skills for Success in the Real World*, by C. Selinger
- Transitionyear.org