Welcome to the
Swanson School of Engineering

The Swanson School of Engineering
Summer Reading Packet
For Students Entering Fall 2016 (Term 2171)

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 2020! 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
Preparing for Your Transition

What is the purpose of college? Why are you enrolling at Pitt?
What are your motivators for studying engineering?
How can you set goals and achieve them over the next four years?
How can you make sure you are best prepared to begin at Pitt in the fall?
What resources will you need to utilize on campus?

Navigating Your Parental Relationship

How will your relationship with your parents change?
What conversations do you need to have with your parents before leaving for college?

Reflection

How will this academic year differ from previous years?
How to I need to prepare for this year to be most successful?

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!
Preparing for Your Transition
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.
How to Set College Goals
Knowing What You Want to Accomplish Is as Important as Knowing How to Do It
By Kelci Lynn Lucier
http://collegelife.about.com/od/academiclife/a/How-To-Set-College-Goals.htm

Having goals in college can be a great way to stay focused, motivate yourself, and keep your priorities in order when things get stressful and overwhelming. But just how can you set your college goals in a way that sets you up for success?

Think about your end goals. What kind of goals do you want to achieve during your time in school? These goals can be large (graduate in 4 years) or small (attend a study session for chemistry once a week for at least a month).

But having a main goal in mind is the first, and perhaps most important step, in setting realistic goals.

Be specific with your goals. Instead of "Do better in Chemistry," set your goal as "Earn at least a B in Chemistry this term." Or better yet: "Study at least an hour a day, attend one group study session a week, and go to office hours once a week, all so that I can earn a B in Chemistry this term." Being as specific as possible while setting your goals can help make your goals as realistic as possible -- meaning you'll be more likely to achieve them.

Be realistic with your goals. If you barely passed most of your classes last semester and are now on academic probation, setting a goal of earning a 4.0 next semester is probably unrealistic. Spend some time thinking about what makes sense for you as a learner, as a student, and as a person. If you're not a morning person, for example, setting the goal of waking up at 6:00 a.m. every morning to hit the gym is probably not realistic. But setting the goal of getting in a good workout after your Monday, Wednesday, and Friday afternoon Shakespeare class probably is.

Similarly, if you've been struggling with your academics, set reasonable goals that focus on helping you make progress and improve in ways that seem reachable. Can you leap from a failing grade last semester to an A this semester? Probably not. But you can aim to improve to, say, at least a C if not a B-.

Think about a realistic time line. Setting goals within a time frame will help you set deadlines for yourself. Set goals for a week, a month, a semester, each year (first-year, sophomore year, etc.), and graduation. Every goal you set for yourself, too, should have some
kind of time frame attached. Otherwise, you'll end up putting off what you need to do since there's no deadline by which you promised yourself you'd reach your goal.

Think about your personal and intellectual strengths. Setting goals can be challenging for even the most driven, determined college students. If you set yourself up to do things that are a bit too challenging, however, you can end up setting yourself up for failure instead of for success. Spend some time thinking about your own personal and intellectual strengths. Use your strong organization skills, for example, to create a time management system so you stop pulling all-nighters every time you have a paper due. Or use your strong time management skills to figure out which co-curricular commitments you need to cut in order to focus more on your academics. In essence: Use your strengths to find ways to overcome your weaknesses.

Translate your strengths into details. Using your strengths -- which everyone has, so don't sell yourself short! -- is the best way to get from idea to reality. When setting goals, then, use your strengths to make sure you:

Have a plan and a way to get there. What is your goal? What specific things are you going to do to reach it? By when?

Have a way to check your progress. How will you know if your goal is working? When will check in with yourself to see if you're making the smaller steps you need to take along the route to reaching your big goal?

Have a way to hold yourself accountable. What will happen if you don't do what you promised yourself you'd do? What will you change?

Have a way to adapt to change. Inevitably, something will happen that will throw a wrench in your plans. So what will you do to adjust to change? Being too strict with your goals can be counterproductive, too, so make sure you're flexible.

Have rewards built in along the way. Don't forget to reward yourself for reaching mini-goals along the way to reaching your big goals! Setting and working toward goals takes major work and dedication. Reward yourself to keep your motivation up and to, well, just be nice to yourself. Because who doesn't like a little recognition, right?
Good Mental Health Away From Home Starts Before College
Now is the time for teens and parents to think about how to handle disorders without the family nearby
By Andrea Petersen
http://www.wsj.com/articles/good-mental-health-away-from-home-starts-before-college-1428944477

When Eliza Lanzillo went off to college, she was excited to leave behind her old school, her old routines—and her old mental health challenges.

“I thought of it as a clean slate. Nobody knows my history. I could be a new person,” says the now 21-year-old junior at Brown University. “I didn’t want people to see me as the girl with anorexia.”

Ms. Lanzillo started struggling with the eating disorder and anxiety in high school. She had been doing so well the summer before college that she stopped therapy when she arrived for college in Providence, R.I. But a few months into her first semester, she relapsed.

With high-school seniors deciding where they’ll be attending college in the fall, now is the time, psychologists and psychiatrists say, for teens and their parents to focus on how to maintain good mental health away from home. This is particularly vital for the growing number of teenagers who have already struggled with mental illness in high school.

About 14.3% of college students were diagnosed with or treated for anxiety problems during the past year, and 12% were diagnosed with or treated for depression, according to a spring 2014 survey of 79,266 college students by the American College Health Association. That is up from 10.4% for anxiety and 10.2% for depression in the fall 2008 survey. Anxiety and depression are the most common disorders, according to the survey.

Why mental illness seems to be rising among college students is unclear. Better medications and therapies are likely making it possible for more young adults with even serious mental disorders to attend college. The growing number of outreach programs by colleges is likely bringing more young adults into treatment. Advocacy groups like Active
Minds Inc., a nonprofit with chapters on 428 campuses, are trying to reduce the stigma around having a mental illness.

But many students arrive unprepared, experts say.

“What happens is everyone is under the impression that at the end of high school, magically college will be different,” says Anne Marie Albano, director of the Columbia University Clinic for Anxiety and Related Disorders in New York. “That once she or he gets away from the same old routine and the same old peers that never connected with him, and the teachers who were mean, it is going to be different. And it isn’t.”

Indeed, in a study published in JAMA Psychiatry in 2014 that followed 288 adolescents and young adults with anxiety disorders, nearly half relapsed within six years of treatment. Late adolescence is also when more serious illnesses such as schizophrenia and bipolar disorder often kick in.

Living away from home for the first time, making new friends and handling the rigors of college coursework can all make the transition to college difficult—especially when those are added on top of an existing mental illness.

“Even good change is stressful,” says Micky M. Sharma, a clinical psychologist and the director of the Office of Student Life Counseling and Consultation Service at Ohio State University. He says traffic in the counseling center surges in mid-October, around the time of the first midterm exams.

Psychologists and psychiatrists say it is critical for students to become as independent as possible during the months before school starts.

Parents are on the hook, too. Now is the time for them to learn to let go. They should move from doing things for teens to taking on the role of adviser or coach, experts say. That includes formulating strategies and weighing solutions to problems with children and—after they make attempts at independence—reviewing how things went.
This often means parents must confront their own anxieties about their children failing. Ideally, parents should be practicing letting go all along and not waiting until just before college starts.

Concerned adults should try to avoid becoming what Dr. Sharma calls snowplow parents: those who remain too involved at college. “They will just come in and knock me out of the way to make sure their son or daughter gets what they need. Just because you can text your son and daughter 10 times a day doesn't mean that should be happening.”

Dr. Albano at Columbia runs a six-to-eight-week college readiness program for high-school seniors with anxiety disorders and depression. During “exposure” group sessions, teenagers role-play to practice talking to professors and meeting new people—and learn to deal with negative or anxious thoughts that arise.

Dr. Albano has Columbia colleagues act the part of skeptical professors. The teens practice asking for help or extensions on assignments. Students are also sent to cafeterias at local universities to practice getting food and approaching groups of peers.

Then, in periodic transition sessions, parents and teens meet together. The goal is to help parents ease up on any overprotection. Often, parents of children who have struggled with mental illness have responded by doing more and more things for them. Then the children “start falling behind their peers in developmental tasks,” Dr. Albano says.

Dr. Albano has compiled a list of young-adult milestones that include managing money responsibly and establishing emotional independence from parents as part of the overall program dubbed LEAP (for Launching Emerging Adults Program). Parents and teens fill out what she calls scaffolding forms that detail which life tasks the teens can do independently, which they can’t and which are in the gray zone—ones they sometimes do on their own, sometimes not. The families work on moving tasks from the dependent zone to the independent one.
Dr. Albano says college-bound students should go to yearly physicals by themselves. They should also take at least one out-of-town trip alone, including making travel reservations and getting to the train or plane by themselves. “If you end up on a train going to Boston instead of Baltimore, all the better,” Dr. Albano says. “They learn it is not a catastrophe to make mistakes.”

Students arriving on campus also need to make sure they can handle taking their medication and getting refills on their own. Louis Kraus, chief of child psychiatry at Rush University Medical Center in Chicago, suggests students get a seven-day pill pack and set a daily alarm on their smartphones to help remember medication. Dr. Kraus has frank discussions about drinking with students on stimulants and benzodiazepines, drugs that can be deadly when combined with alcohol.

If teens are stable, they may be able to continue working with their home psychologist or psychiatrist via phone or Skype sessions, Dr. Kraus says. But establishing a relationship with a doctor near campus is critical if there’s a risk of a relapse or medication changes. While college counseling centers often offer emergency sessions, waits to initiate regular therapy appointments can be several weeks long.

Many centers have caps on the number of sessions students can have. About ¼ of colleges have no access to psychiatrists except as a private referral, according to a 2013 survey by the Association for University and College Counseling Center Directors.

Still, these logistical problems are solvable. Ms. Lanzillo, the Brown student, found her equilibrium after finding treatment near campus.

The transition also proved tricky for Josh Ratner, a 21-year-old junior at the University of Maryland in College Park. He says not having some basic life skills made his move to college much more stressful. “A lot of parents don’t realize they’re babying their kids. When you have mental health issues, the really simple things become intimidating.”

Mr. Ratner, who struggles with ADHD and anxiety but says he is now doing well, recalls a time when his car broke down at school. “I didn't know what tire I needed, what service station to go to,” he says. “I spent a whole day missing classes on the phone with my Dad.”
Navigating Your Parental Relationship  (Moms and Dads, please read through the second article!)
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.

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There has never been a more emotionally challenging time to be a college student in the United States, especially for freshmen.

College is supposed to be the best four years of a child’s life, a time with few responsibilities and maybe mom and dad footing the bill. All your kid has to do is learn and maybe hit a party or two, right?

Not exactly. Every year at the college orientation programs I run in New England, I watch parents idealize an experience that is actually filled with huge anxiety and change for teenagers on the brink of adulthood. If you want to parent effectively through the transition, take some time to understand what your child’s life is really like at school.

Launching a kid into college is about more than having the money to pay for it. Parents invest so much of their time and identities in the process that it can feel like a part time job. For many parents, the college your child ends up attending becomes a parenting grade. It’s far from easy to hear that your child is depressed, unhappy or failing, especially when many have sacrificed so much to get their kids across the finish line. Ask almost any adult, and most will say college sure beats working.

But that attitude ignores the fact that there has never been a more emotionally challenging time to be a college student in the United States, especially for freshmen. Nearly half of all college students reported feeling hopeless at least once over the past year, according to the 2013 National College Health Assessment. In 2010, a study by the University of California at Los Angeles found the highest-ever recorded levels of stress among first year students, especially women.

I run skills-building programs focused on healthy risk taking, failure resilience, and self-
care for undergraduates around the country. Like any life change, college is filled with anxiety, insecurity, social misfires and the occasional crying in one’s bed at night (I wouldn’t personally know anything about that).

In a much talked about new book, Excellent Sheep, former Yale professor William Deresiewicz calls foul on a system that turns its most elite students into robotic, failure-avoidant machines, hell-bent on success but disconnected from a genuine desire to learn or contribute. “Look beneath the façade of seamless well-adjustment,” he writes, “and what you often find are toxic levels of fear, anxiety, and depression, of emptiness and aimlessness and isolation.” He calls for a wholesale change in how we educate young adults: more service learning and character building, less resume stuffing and wealth obsession.

If your child is the first in your family to go to college – there are about 4.5 million of them starting at universities each year — they are less likely to be academically prepared, understand the financial obligations involved or even graduate. If your child comes from the bottom quarter of income distribution, college is a place where she’s in the extreme minority: In a survey of the top 100 schools, Deresiewicz reports, only 3 percent of undergraduates came from families in the bottom quarter of the income distribution, while 75 percent were from the top quarter.

Besides, the right school still might not make a child happy and, according to new research, students aren’t even learning very much anyway. Last week, authors Richard Arum and Josipa Roska released an update of their shocking book, Academically Adrift, in which they revealed many students had “limited or no learning at school.” In a new follow-up study, the researchers found the now graduated students unable to settle on careers because of a lack of critical thinking skills.

We hate seeing our kids in pain. But trying to fast forward through a child’s struggle can have the opposite effect. “Pain and struggle build muscle,” says Julie Mencher, a psychotherapist in Northampton, MA who consults with colleges on mental health issues. “They are part of the college process. You wouldn’t want them to sail through. They won’t be prepared for life.”
Remember when they were learning to walk? They would face plant, then look right at you. If you freaked, their faces crumpled. If you said, “Oopsie, you fell! You’re okay,” and helped them up, they toddled right on. All these years later, little has changed. The right mix of empathy and optimism will teach your children how to respond to their new experiences away from home. “You have to model the ability to cope with feelings,” Mencher says. “Your reaction will influence theirs.”

Taking full advantage of all that college offers can be tough for teens facing a major life transition under pressure to perform. Perhaps we should all lower our expectations and let kids find their way. You can give them the opportunity to thrive, but when it comes to finding happiness or success, kids are really on their own. The good news is that an adolescent’s emotional roller coaster comes with one plum benefit: feelings pass and shift quickly. Last night’s despondent text can turn into tomorrow morning’s happy hello. Kids also reserve their foulest feelings for parents and most college students don’t want to get pegged a downer by their new friends. That leaves you as the receptacle for their anger and frustration.

If your kid seems happy, godspeed. But just because she rocked college last year doesn’t mean she won’t minor in heartbreak or identity crisis next semester. Be prepared. Look your kids’ struggles in the eye, and don’t blink. They’ll thank you for it – and text you more often.
Reflection
Stop and reflect on everything you have read thus far.

Why are you enrolling in college?
What are your motivators for studying engineering?
What goals do you want to set for the next four years?
What resources on campus will you need to utilize in order to be successful?

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.

Consider, also, how your relationship with your parents will change. Take this time before you arrive at Pitt for the school year to discuss how you will manage this transition.
Strategies for Freshman Success
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!

Jon Povirk
Computer Engineering
Carlisle, PA
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

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.

Emma Raszmann
Electrical Engineering
Milton, MA
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.

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: 71 hours of lecture weekly, 96 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

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<th><strong>HIGH SCHOOL</strong></th>
<th><strong>COLLEGE</strong></th>
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<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>
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<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>
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<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>
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<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>
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<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>
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<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>
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<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>
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<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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If college students want to excel in the classroom, they’ll need to lay off using their smartphones, according to a new study.

A Kent State University survey of approximately 500 students revealed that coeds using their phones more than 10 hours per day had a significantly lower grade-point average – 2.84 – in comparison to the GPA of those students who only used their phones up to two hours daily – 3.15.

Professors Jacob Barkley, Andrew Lepp and Aryn Karpinski published their findings last month. The survey, The Relationship Between Cell Phone Use and Academic Performance in a Sample of U.S. College Students, follows in the footsteps of previous research done and findings made by the group.

The difference this time, however, is that the researchers controlled for several factors. Those items included gender, high school GPA, class standing and self-confidence for self-regulated learning and academic achievement.

In an email to Government Technology, Barkley explained that after controlling for these known predictors, the group still found the relationship between cellphone use and GPA was “statistically significant and negative.”

“When we normalized students (made them all the same) on a number of factors known to predict academic achievement, heavy cellphone use was still predictive of a lower GPA,” Barkley said. “This greatly strengthens our previous findings, which did not control for these known predictors.”

Initially, as an exercise scientist, Barkley explained he wanted to assess cellphone use as a potential sedentary behavior, similar to watching TV. But since the devices are portable, their use doesn't have to be sedentary and doesn’t appear to be a sedentary activity.

After questioning students, many said smartphones “pull them away” from academic studies and increase their stress level. What triggered Barkley to explore the connection between cellphone use and academic achievement was the misuse of phones on a daily basis in the classroom.

“While some may feel these devices can be problematic – academically – if overused, why
is there no call to curtail their use?” Barkley questioned. “Why is constant cellphone use so acceptable? Perhaps it’s a lack of evidence empirically illustrating the potential pitfalls of cellphone overuse.”

Looking ahead, Barkley revealed that the current study won’t be the last he and his colleagues conduct on cellphone use. He noted there are several projects already under way that look at the use of smartphones and the technology’s relationship to other behaviors and behavioral outcomes.

“I am confident we will have something more to share in the coming months,” he said. “Spoiler alert – the findings are largely not positive.”
Words of Wisdom
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 26th. You will receive time/location information via Pitt email closer to that date.

Best Regards,
First Year Engineering Advising Team

**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