

“Opportunity Awaits”

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Penn State College of Engineering Commencement

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Good Evening. This is a milestone event that sets in motion a significant change in your life and your role in society.

Like you, I have the good fortune to have earned an engineering degree from Penn State.

Tonight, I plan to share with you some insights into how to excel as you transition from academic life into your career. I begin with three personal values that have served me well. They cannot be compromised if you truly want to be successful.

INTEGRITY – Always maintain the highest ethical standards in your decisions and interactions with others. You will need to live with the consequences of your decisions every day. However, I don't mean to infer taking the stance “it's my way or no way.” Ethical engineering always takes into account others knowledge and technical advice.

COMMITMENT – Be good to your word and apply yourself to the best of your ability to follow through. You will soon learn that being an engineer is not only about providing quality deliverables but also about meeting project schedules, deadlines and budgets. If you exhibit commitment, quality and meet project requirements, others will take notice and soon come to rely on you.

RESPECT – Always treat others, subordinates, team mates, managers, clients, owners, regulators, and suppliers fairly and honestly. While you may not always agree with another's perspective, be respectful of their contributions and try to look at the situation from their point of view.

You will find all companies have core values, most will have more than these three I have highlighted and they help set the overall culture of the organization. Make sure you understand them and support them. You must be able to demonstrate with your behavior and actions that you are aligned with those values. There are also many opportunities to stand out and excel. For example, companies value innovation, be it work process improvements, new technologies, or new market opportunities. These can be areas you can use your education to differentiate yourself from others in an organization.

There are also many other opportunities to stand out and excel. Tonight with your futures ahead of you, let's explore a few of them.

Be the one on your team that is continuing to learn. Penn State has taught you the basics of your chosen engineering discipline, and equally as important, our university has taught you how to learn. Now is the time to put that to use. It can be easier than you may think.

Throughout your career seek out mentors and actively communicate with them. Listen to and observe experienced people. Most importantly, try to understand “Why?” Why did they make the decision they did? Why did they not choose other alternatives? Understand how they implemented those decisions and how they got the team to buy in. Pay particular attention to decisions they did not make or those that they left to others. Often leaders choose to leave certain decisions to other team members because they have confidence in their people. This can be very motivating to their team. Plus, true leaders know that there is likely more than one right answer, unlike on your college exams!

To grow in your profession, you need to approach each day as a fresh opportunity. To do that, you must like what you do. You must be honest with yourself about what you are good at doing and at what you are not naturally talented. The greatest disappointments and failures we see is people pursuing jobs they do not have the basic talents to perform. I would love to be paid to play golf. Well, since the highest score does not get the largest payout, another career path was definitely in order!

Know yourself – be realistic and accurate about strengths and weaknesses. After all, if you do not know what you do well, you cannot develop your career to its fullest potential.

How do you know yourself? How do you identify your strengths and weaknesses? It is not through mere contemplation, but through experience and competition. You already have a formal education that has helped you discover these things, and you have been tested rigorously to make sure of it. After you leave here, new experiences and professional training will be part of your career, with new methods of testing and scoring the results.

It is very difficult to change, it is against our most basic human nature, but as engineers we must take advantage of these opportunities in order to grow, to develop new competencies, and to ultimately become a go-to expert.

When you enter the business world, there are a dizzying array of choices. Do you want to be a sole contributor, driving yourself creatively and productively? Do you want to be a part of a research and development team pushing the forefront of products or research? Do you want to be the program manager or business leader who assembles and leads teams, or someone who works the financials or contracts? All these are paths open to engineers. All require different talents and skills, all can be very rewarding.

Some thoughts on strengths and weaknesses. I once had a management consultant demonstrate how one’s greatest strength could be their greatest weakness and how a weakness could be used as a strength. I will give you two specific examples. I am told I am a very quick thinker, but in a team environment I was demotivating and cutting off the ideas from brighter people who just needed more thought time. A coach helped me change that behavior, and I stress the word helped, and note that the change remains a work in process! A weakness is I do not like to work out all the details of an idea or plan, and as they say, the devil can be in

the details. But knowing that enabled adding people to teams who were great at details, forming a thorough and balanced team by giving each participant room to do what they do best.

Be prepared for change and plan for fluctuations in business cycles. I am sure you are all aware our country and the economy have been through a significant down cycle. It has undoubtedly affected some of you through reduced corporate hiring. The economy is beginning to recover and most of the best-run companies are selectively hiring. I will tell you this: there are always opportunities for the best-educated people like yourselves, those who combine capability and self confidence with humility and caring; those who take initiative, think creatively, and fulfill their commitments and those who are willing to accept the challenge of changing to accommodate new ideas, new methods and new business cycles.

One differentiator that means a great deal in our business is engineers that are open to travelling or relocation. Many great career opportunities require travel and will require relocations to places you never considered as a place to live. Treat them all as opportunities to broaden your knowledge base and your perspective. Great for your career, but this can be very hard on families. Good employers know this and try to help. When you accept one of these opportunities, you as the individual own the ultimate responsibility to integrate your family into your new location. Take every opportunity to help them integrate into the new community, they do not get to go to that exciting new job for 12 hours per day like you will.

You may want to know where the best career opportunities are for engineers. Many, many years ago, a classic movie was made and the one word advice was "Plastics." Some of you may have seen that movie. Today there are many opportunities, each appealing to engineers with different interests.

Much of our infrastructure is old, in need of replacement and, where new, more capacity is required. There are major engineering opportunities here, because we must find new ways to build sustainable infrastructure using sustainable construction and operating methods. It is not just about doing more of the same, it is developing entire new approaches and technologies. These are needs you are well equipped to meet.

There are seemingly unlimited opportunities in information transmission, security of data, data collection and analysis. Every user seems to want more information than we can process through our systems. You are fortunate, you are part of a generation that has grown up with an overabundance of information and data. You got this far because you have learned how to manage it and use the parts you needed to graduate. In the business world, we greatly value these skills. It is almost impossible to comprehend how much data is available that is potentially relevant to a decision. What we need is all this data consolidated into simple, accurate and actionable pieces of information. A task that gets bigger every day and more critical as every competitor becomes better, and quicker at using the information.

But bear in mind, the business of engineering is ultimately about winning new projects and delivering to client expectations. You may be asked to work extra hours to help write a technical approach that will be better than your competitors, or to design a sustainable community or perhaps evaluate pricing from subcontractors or suppliers to price the end product at the best margin. If you elect to work for a local, state or federal government agency, you will be asked to do an accurate and thorough job of inspecting private contractors or engineering firm's work or select a contractor or engineering firm in an objective and ethical manner so your decision can survive a legal protest. In this way, business is more like college athletics than scholastics. I will not advise you to be a good loser. You must be passionate to win, and do everything legal and ethical to win.

To thrive and grow, an organization needs clear goals and markets and it must be a winner in those chosen markets. Understand what your organization's goals are and strategy is and make sure your actions support them. If you know the path, it is much easier to stay on it. The good news is there is room for many winners in our society.

Finally, ask questions if things are not clear, and maintain focus on what you've been asked to do. I've seen many projects get derailed by very good engineers making assumptions and not keeping the end goal in sight. If you are not sure, ask.

In closing, I leave you with this challenge. Maintain focus on what you can do and get it done, do not let what you feel you cannot do get in the way of that progress.

Many years ago I sat in a seat not far from here at graduation. I set off into the world of engineering armed with my Penn State engineering degree, self confidence, an intense desire to learn and some basic core values. Oh, I did have a job offer, but the engineering market was collapsing, so one had to first not be laid off. My point is, engineering is a cyclical business. There are constantly ups and downs, but it is a growing need. There are always opportunities for those who bring value to an organization. Believe me, if I can succeed, all of you will be winners as well.

The future is in good hands – Your hands!