

“The Problems You Will Solve”

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Thank you, Dean Elnashai, for this opportunity, as well as the entire College of Engineering. It is deeply humbling to stand before the College of Engineering at this moment. And to my family, thank you for the support each of you have provided along this journey, especially my father, who as a Penn State engineering science grad, started a tradition of being a Penn State engineer which was passed through to my wife and me, our son and daughter-in-law, and hopefully to my soon-to-be-born grandson.

Early in your time at Penn State, you sat in a classroom or auditorium and you might have heard those chilling words: “Look to your left and right, neither of those people will be here on graduation day.” Everyone ponders that differently. “Am I the one in the middle? Am I the one on the left or right?” Doubt can creep in very fast when you decide to be an engineer. Or maybe you took it as a challenge: “I will be the successful one!” And because you are here today, we all have one thing in common: We are the ones in the middle. We are part of the sisterhood and brotherhood of being a Penn State engineer. We envisioned ourselves doing something amazing, we put in the hard work, intellect, and passion that it took to succeed and now, going forward, you are ready to solve the world’s hardest problems, be a visionary, and take ownership of your future.

As engineers, we are problem solvers. I contend that being an engineer is not only about WHAT we have learned but HOW we have learned. Through achieving a degree in engineering, you have gained the ability to speak a common language of science, technology, and innovation—be it strength of materials, dynamics, process flow, or to my electrical engineering sisters and brothers, Z-Transforms and Thevenin Equivalents. And it is because of HOW you have learned to think that you are now equipped to solve the problems of the future.

What makes an engineer a great problem solver? Bottom line: Engineers think differently. I contend that each of you who leaves this university is equipped to think differently. You can solve problems that others cannot fathom. You can take your careers to a place you can’t even imagine. Let me explain the four levels of thinking that are now part of your toolkit.

- First, there’s confidence: This is the foundation we have gained while at Penn State during your perseverance to obtaining this degree.
- Second, inquiry: It is hard to ask a question in a class when you don’t have the confidence to frame the question. Confidence enables you to ponder. Confidence enables you to ask a question. Confidence motivates you to consider what if.
- Third, linkage: Ever had a really tough exam? Have you ever considered that what you were being asked to do was to link dissimilar points in order to solve a problem? It is

precisely this ability that allows us to move in a direction with a speed others cannot understand.

- And finally, the fourth level of thinking in your toolkit, anticipation. Phrases like “I can see the outcome, all I need to do is fill in the steps” or “The game slows down” capture the essence of anticipating. No longer are we reacting. We are doing things, considering options, and moving forward faster than others can imagine. We have transformed from being followers to leaders.

As Penn State engineers, you represent the brightest and hardest working students on this campus. You have been equipped with the tools to go from Penn State and solve the world’s most challenging problems in academia, industry, and society. And now, right now, is the time to create your vision of the future.

Envisioning the future starts with having a vision for yourself. Growing up in State College as a young boy I attended Penn State football games. I told all those around me that someday they would see me run out on that field. I thought I would be in helmet and shoulder pads. When you are 5’7” and 135 pounds, I realized I needed to alter my plan. But, I never lost my vision. So when I marched into Beaver Stadium as a member of the Blue Band, you can understand the emotion of the moment. You can understand me looking up to my old seats and saying “Here I am, I made it.” By sitting here at this commencement ceremony, you have all proven that you can set goals, work to achieve them and be able to say “Here I am, I made it.”

Being a visionary means being willing to take a risk, and if you fail, pivot in a new direction towards success. After graduation I worked for three companies in five years before starting my own company. This company struggled for four years before it failed. The day it failed I had a choice: get a job or start a new company? The decision was simple. I set a new course, bought an airplane ticket to Silicon Valley, went door to door selling my concept and within two weeks, money arrived. Fast forward to today ... Videon is providing technology within the consumer electronics market for tens of millions of people. If you accept that you can take a big risk, and pivot towards success, is there anything limiting you?

Being a visionary means caring about others more than yourself as you endeavor to change the world. I am committed to seeing Happy Valley as a fertile ground for entrepreneurship. I want to see students like you graduate from Penn State and starting thriving businesses in State College and beyond that incorporate social impact, and positive sustainable practices. I am driven to foster partnership with Penn State and the community to encourage entrepreneurial change in a positive manner. You as an individual have the ability to make a difference in a person, in a company, and in the world.

As the chief executive officer of Videon, I am responsible for three things at my company: vision, culture, and results. I ask each of you to look at yourselves and realize that you are also chief executive officers. You are the CEO of the most important resource you will ever lead. That resource, my friends, is you.

- As your own CEO, take ownership of your vision. The days of being told what to do are over. As a Penn State engineer, you have the fundamentals to be a problem solver.
- As your own CEO, take ownership of your culture by defining who you are and what you represent. Do that with confidence, ask questions during your journey, link your experiences to develop wisdom, and anticipate where the future will take you so that you can influence the future through who you are and what you represent.
- As your own CEO, take ownership of your results. Look to obtain not just good results, but amazing results, knowing that as an engineer you can take a risk, potentially fail, but most assuredly, have the ability to pivot as you continually explore what lays before you and you set forth to solve the problems you are destined to solve.

Today is an amazing day. Today is the first day in your journey towards your professional destiny. The problems will get bigger and more complex. But you're equipped to handle them. The vision may get a bit blurry at times. But you're equipped to clarify it. What will never waver is ownership of your destiny. It's yours to do with as you please.

Always remember, you are not the person to the left or right. You are the person who has achieved success. You are the person equipped with a Penn State engineering degree. You can envision a changed world. The clock starts now. Go forth and continue the proud tradition of what Penn State engineers have done before us. Because, we are ... Penn State.