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Redbird Buzz Episode 8: Aondover Tarhule, August 2022

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Redbird Buzz

Episode 8: Aondover Tarhule

August 2022

John Twork 00:09

Welcome to Redbird Buzz, I'm John Twork from University Marketing and Communications. Our guest today is Provost and Vice President for Academic Affairs at Illinois State University, Dr. Aondover Tarhule. Dr. Tarhule arrived at ISU in February of 2020 and since day one on the job one of the major projects he's overseen is developing a new College of Engineering. While discussions about engineering at Illinois State date back to 2016, the project recently took a couple of major steps forward by gaining approval by the Illinois State Board of Higher Education in March and approval by ISU's Board of Trustees in May. Dr. Tarhule joins us today to share his vision for Illinois State's College of Engineering, which is scheduled to launch in 2025.

John Twork 01:04

It's my pleasure to welcome Provost and Vice President for Academic Affairs, Dr. Aondover Tarhule, to Redbird Buzz for a conversation about Illinois State's new College of Engineering. What's the word, Redbird? Provost Tarhule, why is Illinois State starting an engineering program?

Aondover Tarhule 01:21

Thank you so much, John, that's a great question and I'm happy to be invited to do this program. So we have four main reasons for wanting to start this program. The first is employer need and student demand. So as you said, the roots of this program go back to 2016, and in 2017 the university hired a nationally reputable educational consultant, EAB, and tasked EAB with doing a market analytics to determine which programs in engineering would be viable and successful here at ISU. And so from that analysis EAB determined that in fact there was a need for more engineering professionals in Illinois than the universities in Illinois were currently producing, so that's the employer need side of it. Our own analytics from our website showed also that even though we don't have, ISU doesn't have an engineering program, engineering is the third most sought after program that students come to our website to look at. And so the combination of this analytics told us, as I said, employers want more engineers, and students want more engineering degree study opportunities, so that's one. The second is workforce preparation. You've seen a number of industries that are coming up around the central region, Illinois region, we think that engineering offers opportunities for high growth potentials with very high paying jobs and Illinois State is in a great position to train those engineers to contribute to the workforce needs, not just for the central region, but the state as a whole. And then the engineering program actually is part of a larger long-range, comprehensive enrollment management strategy for ISU. As you may have heard, we all expect a demographic decline, everybody has been talking about this for ten years, and so the only way to, one of the best ways to mitigate the impact of that decline on an institution is to have access to new students who ordinarily wouldn't apply. And so if we have additional programs that students want, that right now we don't have access to, by creating this

program we expect to be able to tap into this additional pool of students that might mitigate that decline. And then finally, it's internationalization. As you know, Illinois State has a very small proportion of international students relative to our size and our reputation. We really should be closer to 10%, we're more like 2.5%. And a big part of the reason why we're having trouble getting traction in that arena is a lot of international students want to study engineering. So we don't have that in our portfolio of academic programming and our partners are telling us if we have engineering we'll be able to tap more into this international students market. So you put all of those reasons together and many others that I haven't mentioned, and we think engineering is overdue at ISU and I'm very excited that we're finally in the process of creating this college, which I think will be very successful and very exciting.

John Twork 04:45

It's scheduled to launch in 2025. Can you talk about what degrees will be offered through the new College of Engineering and how does Illinois State plan to differentiate its programs from engineering programs at other universities?

Aondover Tarhule 04:57

Great questions. So we'll begin with three degree programs: mechanical engineering, electrical engineering, and general engineering. Again, these were not just chosen willy-nilly. These were the result of very extensive market analytics to determine which programs we thought were, would be in demand by employers and again by students. So this was done by two separate consultants, did the analysis and concluded that these were the degrees we should be starting with, so those are the ones that we're gonna start with. The question about how we will differentiate ourselves, it's a really important one, and it's one that we spent a lot of time trying to address in our preparations. We are very aware that engineering is a mature discipline and so there's a lot of colleges and programs out there that offer engineering and so we plan to differentiate ourselves, our program, in three main ways. One is the very intentional design to try and address the underrepresentation in engineering. As you know, in a lot of undergraduate degree programs, females, for example, comprise between 65% or even more of the number of undergraduate students. In engineering programs females make up only about 20%. In terms of minorities, ethnic minorities, Blacks, Hispanics, and so on, in some cases it's the single digits. Those types of numbers propagate all the way into the workforce. If you were to go into any kind of industry where engineering is dominant, you don't see a lot of people from those demographics. We would like to contribute to changing that story, that picture, that narrative, and so we have designed our program very intentionally to be very supportive of demographics that are underserved currently in other engineering programs and I think a lot of people will find that very exciting. So the focus on underrepresented groups is one way we'd like to differentiate ourselves. The other way that we'd like to differentiate ourselves is student success. Nationally, the research we have done shows that only about half, maybe even less than half, of all the students who begin in engineering programs graduate with an engineering degree. We'd like to change that. Our six-year graduation rate at Illinois State is about 68.7%. Our goal is that in this engineering college graduation rates should be on par or better than the Illinois State general student population. So we have built in a very intentional success measures, we have looked at a number of proven strategies that help students succeed, and so we want to build those from the ground up. This is one of the reasons why starting a whole new college is super exciting. We don't have to deal with legacy issues, we don't have to deal with traditions that have built up from an existing college, we're starting from a clean sheet. So we've got the advantage of being able to say

what has not worked and therefore what can we do different and make sure that we get a different outcome. So the student success measures is one of the ways we'd like to differentiate ourselves. And then finally, it's the idea, our goal is to produce what I call "workforce ready engineers." Our students will be ready to walk out of the classroom and walk onto a job and perform competently with no additional training required because we have prepared them as such. As you know, in many professional disciplines students get a degree, they get a job, and then employers have to retrain them all over again because there is a divergence, I think, call it a divergent trend between what universities are teaching and what industry is looking for. We want to make sure that we align the curriculum with what industry professionals want. We want to make sure we're working very closely with external stakeholders to make sure that our students have experiential learning opportunities, they have hands-on learning opportunities, they have lots of internships and externships and so they know what they're doing and by the time they end up getting a job, they are prepared to do those jobs. So we think the combination of emphasis on underrepresented groups and high support for that emphasis on student success and emphasis on getting, making sure that our students are workforce ready, we think that's going to be really supported by both the people who hire our students and our students.

John Twork 09:51

It sounds to me like you have some really intentional strategies in place that aren't dissimilar from what Illinois State already prides itself on in many of its areas of an undergraduate education.

Aondover Tarhule 10:03

Absolutely. So in working with the consultants we hired for these programs we set some very specific goals and those goals derived from our current tradition and our values. And we said, we are known for and pride ourselves in being a student-focused, individualized attention institution and would like that reflected in the engineering program. And so it's not accidental and I'm glad you pointed it out, but it's not accidental that you see exactly those same kinds of emphases and prioritization in terms of how we want to do, run this college.

John Twork 10:43

You mentioned there's a great demand among prospective students for engineering programs. Can you tell us about the, what you anticipate the size of Illinois State's engineering program to be in terms of enrollment?

Aondover Tarhule 10:56

So our goal is to recruit about 130 students per year over the next four years, each year that is, so at steady state would have about 520. And that number, excuse me, that number is really determined by the capacity of the facility where we want to house the engineering college. We hired a different consulting firm that specializes in engineering academic facilities and they took a look at the facilities we had and concluded that we would be able to house, you know, about 520 students, so that's what is going to be the size of the engineering college at this phase. We would expect that down the road we get some help from the state. If that were to happen and we got additional funding or support from the state, we would expand the facility and subsequently hope to expand the college to maybe 1500 and 2000. That's several years down the road, but at start we will start with 130 per year and reach a steady state of 520 students.

John Twork 12:10

And what type of scholarship support do you anticipate being available for those students who enroll?

Aondover Tarhule 12:15

Right. So we expect having about \$500,000 in support for engineering, the engineering students. Those students will also be eligible for some of the other university-wide scholarships that we offer, as well as federal and state support programs like MAP and PAL. So those who are qualified for those will get - so on top of the existing support and scholarships that we have, we're carving out about \$500,000 and around half of that will be dedicated to making sure that we achieve our goal in terms of the underrepresented groups.

John Twork 12:59

We mentioned that May 6 was a huge date, that was the day the Board of Trustees approved the creation of the College of Engineering. Tell us what are the next steps in the general timeline leading up to that first cohort of students who will arrive on campus in the fall of 2025?

Aondover Tarhule 13:14

Right. So the very first thing we have to do is to hire a dean, a visionary, energetic, passionate, experienced administrator who will take on the vision and the dream and run with it. And, you know, I would be happy to step back and provide support to that dean. So what we're doing over the summer is we have, with collaboration from our shared governance, I have appointed as a search committee. We're also going to hire a search firm to work with the search committee and produce the job advert and the job description. We'd expect to have that announced, be in the market sometime in early fall. We would like to interview for candidates sometime in late fall. If everything goes well it'd be great if we would have a dean here in spring. That may not happen, it may push into the fall or summer or fall but that's the goal, to try and have a dean here in the spring. Once we do that, then that dean, as I said, will become the lead face, the new face of the engineering college. Meanwhile we're doing a couple of other things. We also have to develop the curriculum. [Inaudible] you have to produce the curriculum, which courses students will have to take, we'll produce the syllabi and so on. So I have appointed a second committee from representative faculty across the campus. Many of these faculty have experience with engineering programs. Some have engineering degrees themselves, so we very intentionally picked them. They will work with another consultant that I am going to, we're trying to recruit, and that consultant will develop the curriculum. Once that is done, we'll run that curriculum through another committee that is required by the shared governance process and eventually submit that to the University Curriculum Committee. If that passes, it will then go to the Academic Senate. If that passes, it will go to the Board of Trustees, and then it will go back to IBHE [Illinois Board of Higher Education]. We expect the development of that curriculum, and all these approval processes, to take between 15 and 18 months. And that has to be ready before the first set of students are here, which is why we're starting on that process now. So that's the second leg of the work that we're doing. And then finally, as you reference, the May 6th Board of Trustees meeting, we were approved to begin work on the architecture and engineering for the for the new building. So the vice president for finance and planning is leading that but we'll get an engineering firm that will look at our space and begin the actual design of the facilities. So that's three things happening, trying to hire the dean, trying to develop the curriculum, and trying to get the space in shape.

John Twork 16:19

Tell us a little bit more about the space. Where will the college be located, why was that location selected, and what is the scope of that facility design and renovation project?

Aondover Tarhule 16:29

Right. So the college is going to be at the John Green facility, it's on Gregory Street on the north side of campus opposite U High [University High School]. So it used to be a warehouse, that's where we had food services, we used to prepare dining services and storage and so on, but since we've got the facility in Watterson they don't need that anymore and it's 80,000 square feet, it's really high, it's got bay doors and windows, so it's excellent and ideally suited for renovation for an engineering facility. So the initial engineering and architecture analysis we have done is that we can convert part of that facility into two floors, create sort of a mezzanine level, and this will be open all the way down, so it's very open. We can incorporate part of the mechanicals of the building into the engineering to create an engineering story and narrative and visuals as you look into the building itself, so we think it's going to be really great. And of course it's walking distance from Cardinal Court, it's not far from Tri-Towers, and so this fits in very well with part of some of those intentional strategies you referenced in terms of student success effort, because we want to be able to create something like learning communities so the students can continue to learn and interact with one another even in residences and so the proximity to those residential facilities is really great for our planning. But this is a very nice facility. We selected it after reviewing seven different facilities and locations on campus, and the consulting firm we hired, you know, had a software that that helped them look at a number of different locations and the advantages and disadvantages and the conclusion was very clear that this was the best facility, both in terms of cost of renovation, this is much cheaper for us to renovate, and also the ability to expand subsequently, which is of course of great interest to us.

John Twork 18:55

Yeah, I think the whole campus is excited to start seeing those artists renderings and, you know, shovels in the ground at some point, so we're looking forward to that. You know, there's a saying that says a rising tide lifts all boats. I want to know, how will the College of Engineering help the entire university at large?

Aondover Tarhule 19:14

We think it's gonna be amazing, you know, from opportunities for collaboration and synergies between engineering and business, engineering and nursing, engineering and fine art. So research opportunities and collaborations will be there, but remember, also, one of the ways that I think this will be really helpful is in terms of mitigating the enrollment or demographic change that we expect. We are a tuition-driven institution, 84%, 86% of our revenue comes from tuition, and so if we were to suffer a catastrophic decline in enrollment that's going to affect everybody. Engineering we thinking is going to help us mitigate that because we bring in new students that we ordinarily wouldn't be able to attract or wouldn't even look at ISU because that's not what they're looking for. So that's going to help us mitigate that and so maintain the fiscal strengths, the financial viability and position of Illinois State University. We expect that as students come into the engineering program, all those students are going to be taking courses like mathematics, gen ed, English, communication, biology, chemistry, and so on and our planning model right now is to support those departments that will be heavily impacted by the new

engineering students with additional faculty lines that will be funded out of the engineering program. So there are, I've heard people say, oh, engineering is going to take resources from us - quite the contrary, engineering is going to be an avenue for injecting resources into other departments that we would have, or we would not be able to do if we don't have the engineering college. So there will be no loss of faculty lines in existing colleges and departments, rather, there will be additional faculty lines that will be supported by the engineering college in areas like mathematics, English, physics, biology, and so on. So that's already a big, you can see how helpful that's going to be. We are also going to have to increase our capacity in terms of labs in physics, mathematics, chemistry courses, like basically the STEM science labs, because the changes we're making, it's not just in engineering, we're also increasing nursing, for example, enrollment in nursing is going to go up by 400 students in the next four years. Well, all those students are going to take biology classes, every engineering students will take mathematics and physics and chemistry and so on so we need to provide additional labs to serve those areas. And so that's the next big project I'm working on that maybe you'll start, we'll start talking about as those plans mature here. So overall, we expect that this is going to, engineering is going to be a big game changer for the university in terms of resources, in terms of research and collaborative opportunities, and also in terms of enrollment and the financial position of the university.

John Twork 22:43

And I've heard you say this before, Illinois State is already in an incredible position in comparison to some other universities in higher education and this seems like it has the potential to just really push Illinois State well ahead into the future.

Aondover Tarhule 22:58

We absolutely are. You know, I'm so excited and so grateful and I feel very privileged to be at this university at this time. There are many faculty members who go through an entire lifetime, they never get an opportunity to create a program, to say nothing about starting a whole new college, so I feel like we're here at a very opportune moment. But if you look at all of the investments, all of the activities and programs we're starting at this university, it's amazing to think about what we will be, what Illinois State will be in two or three years time. There's the college, we are innovating the Fine Art, we, in terms of athletics, we have that new indoor practice facility, we have just renovated John Green, we are innovating the space for the Esports for students, we are talking about a new housing facility. It's difficult to find another period, you may have to go back 40, 50 years to find another period in the history of this university where we have invested so much in the institution during so short a period and we happen to be here at this moment. And a lot of these investments will come through, we'll begin to see the fruits of that, the effects of those, in about 2025, 2026. It's a great time to be a Redbird.

John Twork 24:25

And for our alumni audience listening, I imagine that's an exciting thing for them to hear and perhaps some of them wonder what can they as alumni and friends of the university do to play a role in the development of the College of Engineering? What would you have to say to them?

Aondover Tarhule 24:39

Get the word out, get the word out. We need to recruit, we need to recruit students. It's a program that doesn't exist and so the more people hear about it and what a great program it's going to be, the easier

it will be for our recruitment folks, recruitment not just in terms of students but also faculty. I have told as I gave the charge to the search committee that the caliber and the quality of the people we hire for this position, that the person we hire as dean, is going to set a tone for the college, is going to tell the world what kind of engineering college ISU expects to run. And so for those alumni out there who are familiar with people in the field, please help us out, let us know if you have, you know, you're in a position to connect us to some rising folks or really experienced folks that we can attract to run this really exciting program at ISU. So getting out the word to help with recruitment of staff and students will be important. Funding is also important. Obviously, all of our financial planning at the present time is based on the university paying for the cost of this degree, this college. It would be very helpful if we could get some donor and philanthropic support. The challenge, of course, is that the college doesn't exist so it has no alumni. And so we're hoping to try and get some industry connections, the vice president for finance, for engagement, Pat Vickerman, and myself, would like to talk to a lot of industry stakeholders and people who are interested, friends of the university, to help us with some philanthropic support. That's an area that the alumni can be very helpful as well, in either directly, for those who have means and can, or through their networks and associates. If you can help us open doors and get us talk to the right people, to talk to the right people, that will be very helpful as well. So philanthropic support, that will be helpful, and as we get the students here, engagement and mentoring, those types of activities, internship opportunities for students, whoever has an in or an opportunity in wherever they work, or somebody that they can get us in touch with. There isn't a shortage of means to help and if anyone is listening and they can find a way to help from these examples that I have outlined here, please get in touch with me by email and I'll be happy to find something for you to do.

John Twork 27:24

Your passion about this project is contagious. I'm excited just talking to you about this. You know, it is a massive multi-year undertaking that we're still three years away from seeing the finish line and I guess that's also the starting line for the future of the college. Tell us though, personally, what is it that is the most exciting aspect of this huge project to you?

Aondover Tarhule 27:48

I think it's an opportunity like no other. I think it's transformational. It's going to completely transform ISU, it's going to get us, make us a lot more like a comprehensive university. When you hear about terminology or lexicon used to define universities, you hear comprehensive universities, regional universities, and so engineering gets us closer to be more like an comprehensive university because then we have a much larger range of portfolio, much bigger portfolio of academic programming. So it's transformational in terms of what it brings for ISU in terms of our ability to attract international students, in terms of our ability to become bigger, not just a regional university. Right now the majority of our students are from state of Illinois, which is great, we are a state university and we should serve, you know, the students in Illinois, but to be entirely viable, to get that national imprint and visibility and prestige, engineering is a really important avenue for doing that. And then in terms of what it means for the region, if we are producing graduates who can stay here - lots of data and evidence and statistics show that students tend to remain in the places where they study and find jobs. Right now the statistics show that half of all the students from Illinois who study at four year degrees are doing so out of state, they are going out of the state of Illinois to study. Guess where they remain after they find those degrees, right? So this is once more - I don't claim that this is going to solve all of our problems, we are

a net out migration state in terms of students, this is not going to solve all of that, but it's a small contribution to the fact that it offers students from Illinois who have an interest in studying engineering another opportunity to do so in state without having to go out of state to study and I think for us, people in Illinois, it gives us additional opportunity to retain those students, hopefully who are going to find jobs and become taxpaying, productive citizens. So however you look at it, academically, in terms of economic contribution and workforce preparation, I don't see how you can't be excited about this. I am excited.

John Twork 30:24

Dr. Aondover Tarhule. Thank you so much for your time and we look forward to connecting with you again as this project develops here on Redbird Buzz.

Aondover Tarhule 30:31

Thank you so much, John. It's been my pleasure. Delighted to have [inaudible].

John Twork 30:46

That was Provost and Vice President for Academic Affairs Dr. Aondover Tarhule. For more information about Illinois State University's College of Engineering, visit IllinoisState.edu/College-Engineering. Thanks for listening to Redbird Buzz and be sure to tune in next time for more stories from beyond the quad.