

Theme music ([00:01](#)):

Please listen carefully.

Taylor Pardue ([00:07](#)):

Welcome to the NC State Philanthropy Podcast, telling the world how we Think and Do through the support of our friends, alumni and more. I'm your host, Taylor Pardue.

([00:18](#)):

On this episode, we're joined by Joshua Pierce, a distinguished professor and the executive director of NC State's New Integrative Sciences Initiative, to discuss how private support benefits the university.

([00:32](#)):

Thanks so much for joining us today, Dr. Pierce. To kick things off, just tell listeners a little bit about yourself and what brought you to NC State.

Joshua Pierce ([00:51](#)):

Yeah, great. Thanks. It's great to be here with you today.

([00:53](#)):

So, I was born and raised in northwestern Pennsylvania and went to university at the University of Pittsburgh, studying what I thought was going to be biology and a pre-med track to go to medical school and really fell in love with chemistry at that time. And that love of chemistry led me to graduate school, which I also completed at Pitt, and ultimately a postdoc at the Scripps Research Institute in La Jolla, California. And over that time, [I] became convinced I wanted to become an independent investigator, studying how we can make new small molecules that can treat human disease, particularly infectious disease.

([01:33](#)):

And so, at that point, [I] looked for independent positions. And sure enough, there was a really exciting opportunity at NC State. [I] had applied to a number of places, but NC State provided a really unique opportunity in terms of the types of faculty that were already here, the early days of thinking about interdisciplinary programs, and really just the location for me and my wife and my one-year-old at the time to settle in a part of the country we were really excited about. And so, that got me to NC State.

([02:11](#)):

That was now 12 years ago, and so, it's flown by. It feels like yesterday, but it was an exciting early time here and has led to a lot of things since then.

Taylor Pardue ([02:22](#)):

So, tell us a little bit about your current role, what you're doing now at here at NC State.

Joshua Pierce ([02:27](#)):

So, most recently, in the past few months, I've taken on a role as executive director of the Integrative Sciences Initiative. And this is really an initiative that's been built for a number of years at NC State, starting when Chancellor Woodson started in his position and created the Chancellor's Faculty Excellence positions at NC State, thinking about interdisciplinary science research and training and education, and thinking about how we can bring together folks across colleges and departments.

[\(03:00\)](#):

That really has not been something that land-grant institutions, particularly, have been set up to do in the past. And through all of those programs, we came to recognize a need to create programs that were really in core STEM areas but bridged across our campus focused on the molecular sciences and how we can study and manipulate and apply molecular solutions to really big societal challenges. And over the last five to eight years, we've developed undergraduate and graduate training programs in these areas.

[\(03:37\)](#):

We've developed new coursework around this and, ultimately, been thinking about hiring and strategic development in these areas. And that's now culminating in the Integrative Sciences Initiative, which, excitingly, is going to be housed in the Integrative Sciences Building, which groundbreaking occurred a couple of weeks ago. And the building itself will really be the physical hub of which the Initiative will be housed. And so, this gives NC State an opportunity to now unite researchers from across campus from multiple different colleges and departments, not based on who hired them or what degree they have, but on what kinds of research problems they're interested in and really be able to expose students across these disciplines in ways that our physical spaces currently do not allow here at NC State.

Taylor Pardue [\(04:28\)](#):

What are some of the features that this new building will bring to bear for NC State?

Joshua Pierce [\(04:31\)](#):

So, the Harrelson Hall, the very well remembered building from many alumni at NC State, was torn down a number of years ago, and that site is the location for this new Integrative Sciences Building. The building is 153,000 square feet. It's five stories tall. The bottom two floors are focused on teaching and lab-based instruction for undergraduate and graduate students, and the top three floors are focused on research. And those top three floors, each of them has a core lab that has futuristic, next-generation technologies that can really enable the molecular sciences.

[\(05:13\)](#):

And so, these are the types of equipment that we simply don't have at NC State right now, and in some cases, we're working to build the capabilities that really will make us an international leader in the molecular sciences, having capabilities that almost no one has around the world. And so, those abilities to house this right in the center of main campus and really have it be a portal for students for the public to come in and see what we're doing, I think also represents important decision in this process. We could have put this building in a number of places on Centennial Campus or tucked away on Main Campus, but this is now going to be, and what arguably is the hallmark location, this really historically important location on the Brickyard. And really, in addition to what's happening within the building, we hope the building enlivens this part of campus with time, the Talley Student Union and Centennial Campus, there's been a lot of diffusion of the different areas of excitement on campus. And this building and this project, I think, will really reenergize the Brickyard as well.

Taylor Pardue [\(06:23\)](#):

So, the public will be able to come in and experience this building as well?

Joshua Pierce [\(06:25\)](#):

Yeah, so the ground floor of this building when you walk in off of the Brickyard is going to have a lot of engagement opportunities for people to learn about what's happening within the building, what's

happening within the initiative, and ultimately what's happening across campus in the STEM disciplines and the molecular sciences. In addition to that, we're really focused on not just breaking down the barriers within STEM and engineering and sciences, but to also expand our engagement with campus constituencies that haven't historically been engaged. And so, for example, the College of Humanities and Social Sciences has so much to offer in thinking about how we can create new solutions to these societal grand challenges, how we can think about better interacting and training our students in everything from writing to understanding the history of the science they're studying. And really, it's going to be ... the building provides this physical space for those interactions to happen and for the public to then further engage in those discussions and those dialogues as well. I think the Integrative Sciences Building will ultimately be a destination for folks to come to NC State and learn not just what we're doing, but also become much more educated in science more generally.

Taylor Pardue ([07:48](#)):

I think that's a great segue because not only are the people of North Carolina going to get to really see this building in action, but talk a little bit about the funding that's bringing this building to bear. I know it's kind of a joint operation between public funding and private support.

Joshua Pierce ([08:03](#)):

Yeah, no, it is. And so, we were really fortunate to have strong support from the state legislature in North Carolina, and so, they've been generous enough to provide half of the funding for the building. And so, that's \$90 million, and there's a need to raise another \$90 million that NC State has taken on. And that's really where the relationships we have with our donor base, with our industry partners with the broader North Carolina community, become so important, because this building cannot happen without that support, and we're really excited to partner on ways, whether it's the naming of key spaces within the building or whether it's supporting the programmatic activities that [will] ultimately be housed in the building, whether that's the world-class faculty or supporting students. All of those opportunities are going to be critical to seeing this through.

Taylor Pardue ([08:58](#)):

What's the timeline for this building's completion?

Joshua Pierce ([09:01](#)):

So, the building is slated to open in 2026.

Taylor Pardue ([09:04](#)):

OK.

Joshua Pierce ([09:04](#)):

The first classes will likely take place officially in the building in spring of '27. However, we're building the pieces for all of this now. And so, we are starting to develop and implement the new courses that we will have in the building. We're starting to plan and already have external funding to support some of the research programs which will be housed in the building, the types of futuristic technologies that really completely revamped curriculum. This is a lot of effort from many, many folks across campus, and it's a team effort from faculty and staff from multiple colleges.

([09:43](#)):

This building and initiative is the first effort that's actually housed in the Provost's Office, and so, this building will be the first building that is not tied to a particular college. And so, that represents great opportunities and a lot of new experiences for us to figure out in the coming years. But 2026 is when it'll officially open and be able to have our first engagement with the public.

Taylor Pardue ([10:13](#)):

That's so exciting. I know we just welcomed the class of 2027 here to campus a few weeks ago, and to think about how diverse of a group and how talented of a group that is, and looking forward to hopefully some of them being able to take classes in this new building before they graduate.

Joshua Pierce ([10:27](#)):

Yeah, absolutely. One of the hallmark features of this initiative and building is a new first-year program that'll allow cohorts of students to come into NC State, and instead of making decisions about majors based on something someone told them or some assumption they had about what different majors entail, they'll be able to really engage in interdisciplinary, inquiry-driven discovery across their first year, and through that, and through the engagement with our industry partners and our campus community, really understand what it looks like and what it means to be a chemist in industry or in future academic profession, what it looks like to be a biochemist or a biologist or a chemical engineer.

([11:09](#)):

Because the reality is that it's the experiential learning that helps students understand those decisions. And, unfortunately, the way our current selection process for majors is set up, we just don't give students enough opportunity to experience the majors before they're sort of knee-deep in the majors. And so, the first-year program and a completely re-imagined curriculum as part of that is an exciting aspect of what we're going to do.

Taylor Pardue ([11:38](#)):

So, for listeners who are hearing words like "collaboration" and "interdisciplinary," what are some real-world examples of what a student can expect to experience when they're right down the hall from someone in a different major, different program? How will that all come together for them?

Joshua Pierce ([11:53](#)):

Yeah, so the reality is that the world of science and the world of problem-solving has become increasingly interdisciplinary. And so, you don't just solve problems by having one type of person working in isolation; you have to bring people together, and NC State's been a leader in this. NC State's been a leader in hiring faculty in this regard and training students in this regard, but we haven't had the physical spaces to do it in a way that has really mattered. And so, the Plant Sciences Building on Centennial Campus is a great example of this in the agricultural space. The Integrative Sciences Building gives us a different opportunity in that students currently are doing interdisciplinary training and research; they're just being spread thin across multiple buildings. The logistics of funding them and supporting them are really complex, and we have students ... I'll give you an example. We have a Beckman Scholars program on campus that the Beckman Foundation supports, and this program requires the mentorship of multiple faculty and students working across disciplines. And so, there's a student, there's a biochemistry major, Skylar Harson. She has actually a dual major in biochemistry and chemical engineering. She's conducting research in a biochemistry lab, in a chemistry lab and in a chemical engineering lab — three different buildings on three different campuses.

Taylor Pardue ([13:25](#)):

Oh, wow.

Joshua Pierce ([13:26](#)):

And you can imagine the complications with that. The project requires those three disciplines to come together. It requires the making of new molecules, the study of those new things within a biological context and then, ultimately, the engineering of how we can accelerate and take those things to the next level. And it's a fascinating project. That project will be able to happen within one space within the Integrative Sciences Building, and I think, importantly, the amount of students that we can offer those experiences to.

([13:58](#)):

Right now, it is very in-depth training. There's lots of time and resources required to do this. The numbers are just not where we ultimately want them to be. And through this building, and through the courses and the innovative labs that we'll be able to have within the building, we'll be able to greatly expand the amount of students that we can impact those kinds of experiences and, really, I think, prepare students in a much more meaningful way for the workforce and prepare them in a way that allows them to problem-solve in teams and not just have a singular disciplinary expertise that, ultimately, is not going to be what industry needs, and it's not going to be what they're going to need to succeed in graduate school if that's their next step.

Taylor Pardue ([14:46](#)):

So, we've talked about the private support of facilities. We've talked about private support, like you said, the scholarships. You're actually a recipient of private support in the form of distinguished professorship. Talk a little bit about how being the Howard J. Schaeffer Distinguished Professor in Chemistry furthers your personal work here at the university.

Joshua Pierce ([15:03](#)):

Yeah. Support in that way is transformational for faculty. For me personally, the kinds of resources that you get as a distinguished professor allow you to really go after some innovative scientific questions that are really challenging to fund via traditional grant support from national funding agencies. It allows you to support students through their ability to travel to conferences or to support other professional development activities that they may have. It enables you to have team-building exercises and really allows you to enrich the experience of your research team in ways that state support can't do, and there's just not funding available for otherwise.

([15:49](#)):

I think, ultimately, it also allows you to attract researchers to your team in a way that's different. The prestige that such positions bring lends a credibility to you and your work that is important. And I think expanding these opportunities to more faculty is also a key, I think, goal for our efforts in Integrative Sciences. We want to be able to hire a number of new faculty through the Integrative Sciences effort, and having these types of distinguished professorships really allows us to do that in ways that otherwise wouldn't be possible. And so, it's really beneficial for my own work, it's really critical to grow for the budding programs on campus and I think, really, is an exciting expansion that's happened at NC State over the last decades.

Taylor Pardue ([16:45](#)):

What would you say to a potential donor who is considering getting involved with NC State and why right now is such a great time, whether that's through ISB or, really, any giving opportunity?

Joshua Pierce ([16:56](#)):

Yeah. NC State is at a really incredible moment in time, and I've been here for 12 years, but I've talked with folks that have been here for a lot longer than that, and there's been such steady leadership at NC State, and we have a new flux of really innovative thinkers and leaders. There's three new deans in the College of Sciences, Agriculture and Life Sciences, in Engineering. There's a number of new department heads and directors on campus, and there's been this decade or more of building toward these interdisciplinary programs. We're now at the point that we can really, I think, take things to the next level in a very significant way, and the private support enables us to do that. And so, this building, the Integrative Sciences Building and the initiative at which it houses, is [the] university's number one priority in thinking about taking these interdisciplinary programs to the next level.

([17:57](#)):

And I think it really gives those who want to support us an opportunity to really have a hands-on and significant impact. And depending on the donor's interests, whether it's supporting the construction of these innovative spaces and having sort of the name recognition of doing so or whether it's really a different kind of model where folks are really interested in getting involved and giving their perspective and ideas and then maybe supporting some of the programmatic activities which will accompany that, I think it's limitless, the opportunities. I think it's really just a matter of getting engaged and understanding what the vision can be and whether the interests are in pure STEM or whether they're span into the humanities and social sciences and arts, or the integration of all of those things. I think there's ample opportunity to get involved, and we're really excited to have those conversations.

Taylor Pardue ([18:53](#)):

Sounds great. Thanks so much for joining us today, Dr. Pierce, and just for all that you're doing with the Integrative Sciences Initiative and the building and just the university in general. It's really appreciated.

Joshua Pierce ([19:05](#)):

Yeah, thank you so much for having me. It's an incredibly exciting time to be at NC State, and I'm really excited about the next few years.

Taylor Pardue ([19:17](#)):

For more information on the Integrative Sciences Initiative, please visit go.ncsu.edu/isi. If you'd like to hear even more stories of Wolfpack success, please subscribe to the NC State Philanthropy Podcast today in the Apple or Google Podcast stores, on Spotify or through Stitcher. Be sure to leave us a comment and rating as well to let us know how we're doing. Thanks for listening, and as always, go Pack.