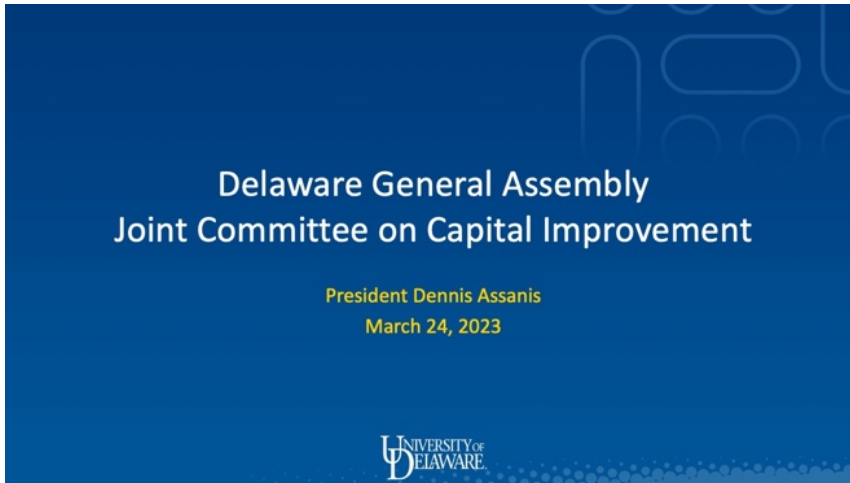


University of Delaware President Dennis Assanis
Delaware General Assembly Joint Committee on Capital Improvement
March 24, 2023
(As prepared for delivery.)



Good afternoon, Senator Walsh, Representative Heffernan and other members of the Joint Capital Improvement Committee.

I appreciate the opportunity to speak with you today about the University of Delaware’s capital appropriation for FY24. Here with me is Provost Laura Carlson, who joined UD last year, and Executive Vice President and Chief Operating Officer John Long. We also have several other members of our team available to help answer any questions you may have.



I want to begin by expressing how grateful we are for our close working relationship with the state of Delaware. The ongoing support from the General Assembly and Governor

Carney has been invaluable in achieving our shared goal of advancing the wellbeing of Delawareans both now and into the future.

A significant element of meeting this goal is providing the physical places that serve the needs of our students and the entire state. To remain economically healthy and competitive, Delaware needs modern educational and research facilities.

And our commitment to providing these spaces and opportunities is what drives our Bond Bill requests this year.

UD & the State: Advancing Delaware's Future

EDUCATION	RESEARCH	ECONOMIC IMPACT
		
\$30M for deferred maintenance in our academic facilities	\$7M for the National Institute for Innovation in Manufacturing Biopharmaceuticals (NIIMBL)	\$15M for the Securing American Biomanufacturing Research & Education (SABRE) Center

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There are three elements in our FY24 request, corresponding to our three-part mission as a land-grant university.

First, our primary request is for \$30 million to assist with our \$500 million deferred maintenance backlog in our academic buildings. These facilities are essential to providing the world-class education that Delawareans need to compete and succeed in the modern economy.

Second, we are asking for your support for \$7 million as part of Delaware's commitment to the National Institute for Innovation in Manufacturing Biopharmaceuticals, or NIIMBL. As a central element of our research mission, NIIMBL is helping to bring life-saving medicines to people in Delaware and around the world.

And third, we are seeking your support of \$15 million toward building and equipping the Securing American Biomanufacturing Research and Education — or SABRE — Center. This facility will enable biopharmaceutical testing and train highly skilled workers in this industry. It is yet another way that UD is fulfilling its mission to be an engine for economic development in our state.

As I share the details of these three requests, I also want to update you on several past and ongoing projects that have received Bond Bill funding so you can see the impact of the state's investments.



As I said, the first part of our request is about taking care of our educational and research infrastructure.

We are grateful that Governor Carney has recommended \$20 million in his FY24 capital budget for deferred maintenance projects. Considering UD’s extensive capital needs and recent increases in costs, we are requesting that you add \$10 million to that recommended amount.

UD has nearly 2 million square feet of lab space on campus, and about 85% of it is more than 25 years old. Many of these buildings need new HVAC systems, electrical systems, emergency generators and other upgrades. The labs themselves need new equipment and furnishings, and in many cases, they are too small to accommodate the number of students taking classes in them.



In this slide, you can see some of the conditions in Drake Hall, which is a 52-year-old academic building at the heart of campus that is used every day by hundreds of students majoring in the sciences and many other programs.

Equipment and furnishings are old and in poor condition. The labs are cramped, which prevents instructors from watching students as they work. Students have little or no space to store their personal belongings, so those items usually get piled on the floor or in the hallways.



With \$30 million in state capital appropriations over three years, we were able to finally renovate a portion of Drake Hall and add chemistry labs to accommodate more students in the STEM disciplines.

With a more open floor plan in this addition, instructors can adequately monitor students, and personal belongings can be stored properly. This is how we want all of our labs to look.

I want to thank this committee for its support of this project. We are planning a formal ribbon-cutting event for Drake later this year, and I hope you will join us to see the improvements we've made.

To be clear, though, older labs still exist in the sections of Drake Hall that have not been renovated yet. Even with the addition, we do not have enough space to accommodate all of the students taking introductory chemistry labs there, so we still have to use the old labs. And the labs in Drake Hall are fully booked for classes from 8 a.m. until 9 p.m. five days a week every semester.



A number of other academic buildings on our campus also have dark, crowded conditions and outdated facilities. Here you see Spencer Lab, Wolf Hall and Colburn Lab, which are three of our main engineering buildings.

Until a few years ago, we were making steady progress in reducing our backlog of deferred-maintenance projects, but we had to trim that spending because of the pandemic.

Right now, we are facing a backlog of about \$500 million.

One reason for such a large figure is that we have committed to paying prevailing wage on all capital projects at UD. This benefits the state’s workforce and economy, so we are asking you to support that commitment with increased funding, as the committee did last year.



The good news is that UD already has excellent science and engineering programs, thanks to the strength of our faculty. As you may know, engineering at UD is consistently ranked among the best in the nation.

According to *U.S. News & World Report*, our undergraduate Chemical Engineering program is #2 in the nation, tied with Georgia Tech and just behind MIT.

These and other excellent STEM programs enable Delawareans to earn an outstanding degree close to home at an affordable price, while also contributing talent and innovation to the state's science- and technology-based economy.

But we cannot become complacent. And our aging facilities and our deferred-maintenance backlog are a clear disadvantage when prospective students and faculty — including those from Delaware — compare UD with other universities in the region.



For example, Penn State University, which is one of our biggest admissions competitors, is constructing a massive engineering hub, with the state contributing almost three-quarters of the cost, or more than \$230 million.

The University of Maryland, which already has extensive and modern engineering facilities, is planning a new \$150 million interdisciplinary engineering building — again with state funds covering about three-quarters of the cost.

And Rutgers University in New Jersey has received more than \$400 million from the state over the past several years for a variety of capital projects, including construction of the new 104,000-square-foot Richard Weeks Hall of Engineering.

We need to make the same kind of commitment to building modern academic facilities at UD if we want to continue providing top-notch STEM education to Delawareans now and into the future. As we develop a long-range funding plan to accomplish this, we need your assistance to adequately address the financial and competitive challenges presented by our existing infrastructure.

We also need to continue investing in long-term growth. One of the most dramatic examples of adopting this mindset is UD's Science, Technology and Advanced Research (or STAR) Campus.



Here you see an aerial photo from 2011, which was a few years after Chrysler closed its assembly plant and UD purchased and began clearing the site. This photo is taken as if you're hovering over Delaware Stadium and looking west, with the train tracks on your right and I-95 off to your left.

As you can see, it wasn't much more than 272 acres of dirt and concrete with a couple of old buildings, a water tower ... and a lot of potential.

Compare that to the way it looks today.



In a little more than a decade, more than 1 million square feet of modern academic, laboratory and office space has been built or renovated by UD and its industry partners.

In the foreground, you can see the Health Sciences Complex and the Tower at STAR, which are largely focused on teaching and research in the healthcare field. There are also several clinics that provide primary care, physical therapy, speech-language-hearing therapy and other services to the public. The work we do with patients also informs and drives our teaching and research efforts.

Behind that — in the center of the photo — is the Ammon Pinizzotto Biopharmaceutical Innovation Center where we conduct a lot of research in that field and which serves as the national headquarters for NIIMBL.

To the left is the Chemours Discovery Hub, which is the company’s global research and development facility.

In front of that is a currently vacant parcel that will soon be developed as a residential and retail complex, which will help advance our vision of making the STAR Campus a real community, not just a collection of labs and offices.

I want to highlight one of the buildings in the back, the brand-new Fintech Innovation Hub.



State capital funding helped us fit-out the building with the partitions, cabling, wiring, furnishings and other work to make it suitable for occupancy. Thank you for that assistance, and we look forward to inviting you to the formal opening later this year.

The Fintech building represents a partnership among UD, Delaware Technology Park and Discover Bank to help build and strengthen the state’s growing financial-technology sector. In addition to Discover Bank, tenants include Delaware BioScience Association and The Venture Center, which is a leading fin-tech incubator and accelerator, as well as UD’s Horn Entrepreneurship program and Office of Economic Innovation and Partnerships.

It is an excellent example of how a capital project can help create and accelerate economic development.

The building is designed to enable collaboration and cross-pollination among the people who work there. It features a large community conference center, smaller break-out rooms and The Grain Exchange, a full-service restaurant on the first floor for the kinds of casual but productive conversations that solve problems and yield new and exciting ideas.

Within two years, we anticipate the tenant organizations and outreach programs will create at least 10 startups and 300 new jobs.



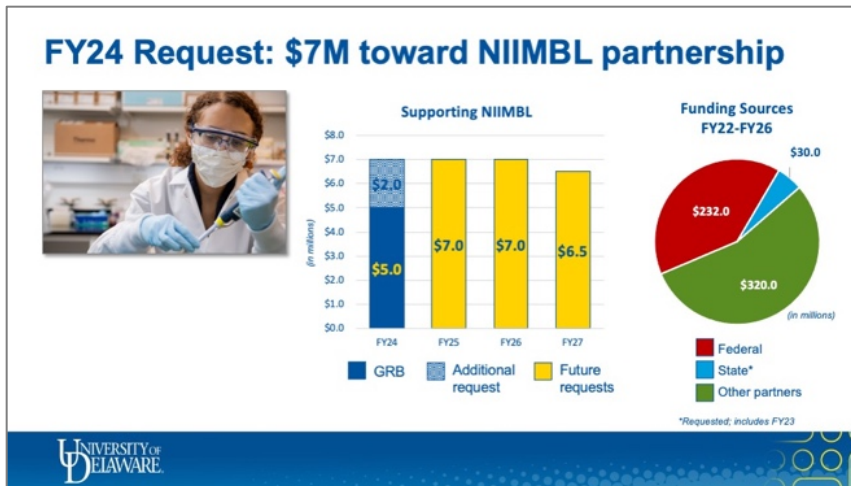
Indeed, the STAR Campus has grown into a bustling hub of students, researchers, innovators, entrepreneurs and the public, helping to drive economic growth for the entire state. They work in the fields of health science, clean energy, financial technology, chemical engineering and many others.

In his State of the State address in January, Governor Carney highlighted the positive impact of the STAR Campus, noting that more people work there now than the number who worked at Chrysler when it closed in 2009.

What's even more exciting is that we're really just getting started, with almost limitless potential for future development and growth.

We see the STAR Campus as a centerpiece of our vision for a new kind of engaged university — one that fulfills its research mission through close partnerships with the public, private and nonprofit sectors for the benefit of society.

And this brings me to the second part of our Bond Bill request.

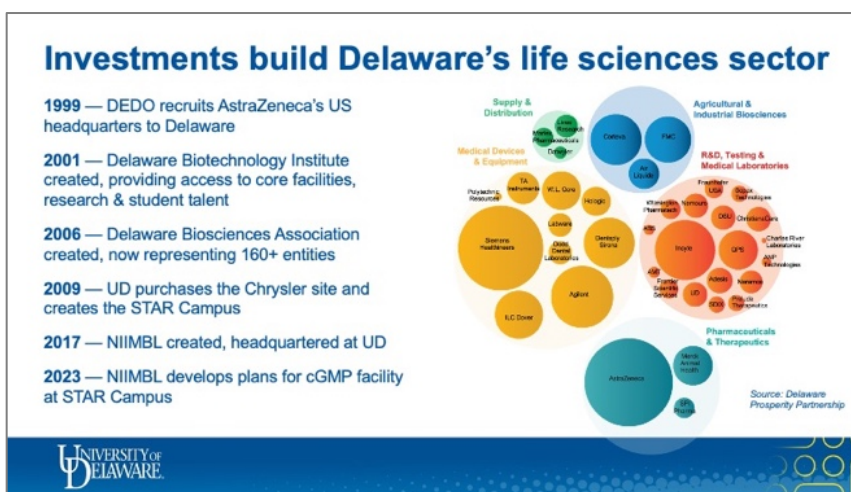


To continue the growth of research and innovation in service to the public, the state is asked to contribute \$7 million in FY24 toward the NIIMBL partnership.

As you can see in this center bar chart, this funding is part of a multi-year request to invest \$27.5 million over the next four years. We are grateful that Governor Carney has recommended \$5 million for NIIMBL in his FY24 budget. We would ask you to increase that to \$7 million to leverage greater investments through our NIIMBL partners.

State support is one element of the total funding package for NIIMBL over a five-year period, as shown in the pie chart on the right. Federal funding and investments by NIIMBL’s other partners make up 95% of the total.

I want to take a moment to explain what NIIMBL is and why it represents such a unique and powerful investment for the state.



That story actually starts more than 20 years ago, as the state made a strategic decision to invest in building a new science- and technology-based economy. Thanks to this long-term

plan and sustained funding, the life-sciences industry has grown to become one of the largest employment sectors in the state, with about 11,000 workers today.

The University of Delaware has been an integral part of this process by providing education, training and research in life sciences, as well as attracting entrepreneurs and established businesses to the state.



Building the bioeconomy for Delaware & the U.S.

NIIMBL
The National Institute for Innovation in Manufacturing Biopharmaceuticals

Mission:

- Accelerate biopharmaceutical innovation
- Support development of standards that enable more efficient and rapid manufacturing capabilities
- Educate and train a world-leading biopharmaceutical manufacturing workforce

Partners: 200+ in the public, private, nonprofit and academic sectors, including 22 in Delaware

Investment: \$580M total by UD and partners

Ammon Pinizzotto Biopharmaceutical Innovation Center, headquarters of NIIMBL

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When the U.S. Department of Commerce was looking for a place to locate the headquarters of a new Manufacturing USA institute focused on producing biopharmaceuticals, Delaware was the perfect fit.

Biopharmaceuticals are different from more traditional medications. They're made from living cells, and they have the potential to prevent, treat or even cure many of the most devastating diseases.

They're also extraordinarily complex, so they have to be made in very precise ways. Even though companies compete on the drugs they make, they all use similar manufacturing processes, and they all need more robust and innovative manufacturing methods. NIIMBL enables them to work together and with researchers at UD and elsewhere to develop those innovations that enhance patient access to medicines.

NIIMBL is a nationwide consortium of more than 200 public, private, nonprofit and academic entities focused on developing more efficient and cost-effective ways of producing biopharmaceuticals.

Since 2017, NIIMBL has resulted in more than \$200 million in spending related to biomanufacturing among Delaware's 22 members.

NIIMBL's presence here has encouraged many companies to locate or stay in Delaware, has led to the creation of more than 500 jobs in this sector and the retention of hundreds more, and has attracted millions of dollars in private capital investment.

As Governor Carney noted, NIIMBL was “critical” to the decision by WuXi to build its pharmaceutical manufacturing campus in Middletown, which is expected to create about 500 jobs by 2026.

NIIMBL also continues to benefit Delaware Technical Community College and Delaware State University by expanding their access to national partners and collaborative education and research projects.

There is additional information about NIIMBL in your information packets, and we would be more than happy to give you a tour of the facilities at the STAR Campus whenever you would like.

Without a doubt, NIIMBL has raised Delaware’s profile as a national leader in biopharmaceutical manufacturing. It also presents us with the opportunity to develop the SABRE Center on the STAR Campus, which is the third part of our Bond Bill request.

Training skilled workers in biomanufacturing

Securing American Biomanufacturing Research & Education (SABRE) Center

- 90,000 sq. ft.
- Train workers in current Good Manufacturing Practices (cGMP)
- Provide testing and production facilities

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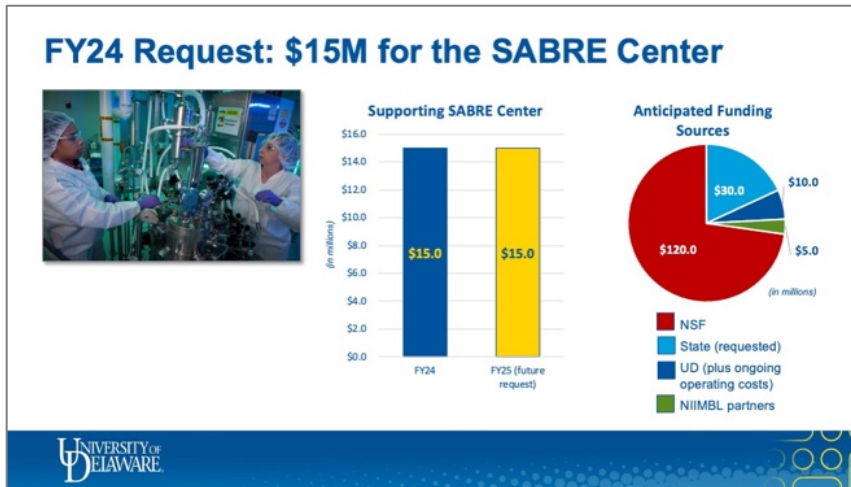
The SABRE Center would be a 90,000-square-foot facility to train workers in current Good Manufacturing Practices, or cGMP. Workers with these highly technical skills are essential to the production of biopharmaceuticals and other products that require extraordinarily clean and precise manufacturing techniques.

It will also provide biopharmaceutical companies with a facility to test their innovations and make their products in an FDA-regulated environment. We anticipate that the center will be a major driver in transforming the local economy by attracting even more capital investment in biopharmaceutical manufacturing.

The photos you see on this slide are actually of similar facilities in Ireland and North Carolina, where they have helped attract and create tens of thousands of jobs and billions of dollars in capital investment over the past 10 to 20 years.

The opportunity for Delaware is that North Carolina has now become oversaturated with biopharmaceutical facilities, and companies are looking for new places to grow their manufacturing capabilities. They need access to a workforce with cGMP skills, and they'd like to be near research-and-development hubs and federal facilities.

With the addition of the SABRE Center on the STAR Campus, Delaware will be exactly what they want.



Therefore, we are requesting your support for \$15 million in FY24, followed by an additional \$15 million in FY25, to help fund the construction and outfitting of the SABRE Center, as shown in the center bar chart.

State support would represent about 20% of the funding needed for the \$150 million project, as shown on the right. More than three-quarters of the funding would come from federal sources.

Conservatively, we estimate that the SABRE Center will generate about 3,500 jobs over the next five to 10 years, in addition to the initial construction jobs.

This project is an excellent example of how UD works to fulfill the economic-development portion of its land-grant mission. So, I want to take a moment to highlight the results of a recent study on the University's economic impact in Delaware.

The University of Delaware is proud to be an economic engine in Delaware, fueling a

\$3.2 BILLION IMPACT

that supports more than

26,000 JOBS.

Learn more at udel.edu/delawareimpact

The study found that spending by the University and its students, employees and alumni — plus the ripple effect of those dollars — results in a \$3.2 billion impact on Delaware’s economy. And that impact supports more than 26,000 jobs in the state.

In fact, every \$1 the state invests in UD through its operating appropriation generates about \$23 in Delaware’s economy. That’s a huge return on the state’s investment.

Before we conclude, I want to mention one other way that UD helps the state’s economy, thanks to funds from the Bond Bill.

Helping municipalities access federal funds

Some examples:

- Milford and Slaughter Beach Pedestrian multi-use pathway along Route 36
- South Bethany and Bowers Beach Resiliency projects to offset the impacts of climate change

The screenshot shows the 'Grant Assistance Program' website with the following content:

Grant Assistance Program
Available Funding Opportunities for Local Governments

This online portal provides an overview of new and existing funding opportunities for local governments in Delaware. Click on "Category" to see funding opportunities by category, browse fund types, and view agency websites. Click the "Learn More" button to visit the agency website for that funding opportunity.

Category	Project Name	Project Description
Brownfields Projects	Category: Brownfields Application Period: August - November Project Size: \$100,000 - \$1,000,000 Brownfields Loan Interest: 0%	Environmental Protection Agency's Brownfields Program provides loans to eligible states, communities, tribes, and nonprofit organizations to promote voluntary, clean-up, and reuse of brownfields sites.
Building Resilient Infrastructure and Communities (Robert T. Stafford Act Section 203)	Category: Resilience Application Period: September - January Project Size: \$100,000-\$1,000,000 Grant Match: Loan Interest: 10-20% match	Resilience: The Building Resilient Infrastructure and Communities program makes federal funds available to states, U.S. territories, federally recognized Tribal governments, and local communities for hazard mitigation activities.
Business and Industry Loan Guarantee Program	Category: Community Economic Development Application Period: Rolling Project Size: N/A Grant Match: Loan Interest: Negotiable	The purpose of these loans is to improve, develop, or finance business, industry, and employment and improve the economic and environmental climate in local communities.

The Grant Assistance Program is a partnership between the University of Delaware's [Institute for Public Administration](#) and the State of Delaware.

The Grant Assistance Program was launched last summer by UD’s Institute for Public Administration to help Delaware municipalities access funds from the Federal Infrastructure Investment and Jobs Act.

So far, the initiative has supported local governments in submitting nine grant applications totaling \$7.3 million to help address issues such as flood mitigation, stormwater management, community facility construction, and planning for bicycle paths and the

infrastructure for electric-vehicle charging stations. The program is also supporting local government compliance with \$5 million in awarded federal infrastructure funds.

Also, we recently launched a five-part training series on grant development. Thirty-six people representing 19 local governments participated in the first training.

I want to thank the Bond Bill committee for the funding for this program. Please also encourage the municipalities in your districts to reach out to UD for more information about this program and other ways we can assist them.

UD & the State: Advancing Delaware's Future

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UNIVERSITY OF DELAWARE

As you can see, the University of Delaware's Bond Bill requests this year are critical to the fulfillment of our mission to provide an outstanding education for Delawareans, to pursue the research that helps people live longer and healthier lives, and to build and strengthen the state's economy now and for future generations.

I thank you for your time today, and we will be happy to answer any questions you may have.

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