Board of Trustees Retreat

President Dennis Assanis
October 3, 2019
An Extraordinary University

Legacy of Innovation

Our Proud Past: We stand upon a strong legacy of innovation and powerful pursuit of knowledge that has helped define an extraordinary University.

Built for Connectivity

Our Vibrant Present: UD is evolving with momentum to align with a dynamic generation of “always on” engagement, innovation, technology, and global connectedness.

Empowering World Changers

Our Bold Future: With no time for complacency, we are reimagining the capabilities and opportunities of our institution and our people for transformative impact on the world.
The UD Story

Our Circle of Excellence

- Ensuring our great students, faculty & staff have what they need to succeed
- Delivering an innovative & dynamic education
- Promoting research & discovery to build a better world for all
New students shape UD

Class of 2023

- 4,146 first-year students (Newark campus)
  - Academically excellent — Average 1275 SAT and 3.8 high school GPA
  - Largest class of Delawareans — 1,407
  - The most diverse class — 723 underrepresented minority students

- Largest and most diverse Associate in Arts class — 471

- Largest group of transfer students — 552
Unique programs draw great students

Special Programs
- Avg. 1322 SAT; avg. GPA 3.98
  - World Scholars — 121 in 4 countries
  - Access:Ability Scholars — 45
  - Community Engagement Scholars — 59
  - Cybersecurity Scholars — 23
  - Delaware Innovation Fellows — 60
  - Grand Challenges Scholars — 42
  - Delaware in DC — 30

Honors Program
- Largest enrollment — 636
- Avg. 1425 SAT; avg. GPA 4.13

Iris Perez-Mazariegos (left) and Johnny Perez-Gonzalez are Community Engagement Scholars who gathered stories last summer from members of the Latinx community in Sussex County.
Growth in Delaware undergrads

**Newark Campus**
(Full-time students)

- 2010: 5,336
- 2011: 5,400
- 2012: 5,500
- 2013: 5,600
- 2014: 5,700
- 2015: 5,800
- 2016: 5,900
- 2017: 6,000
- 2018: 6,100
- 2019: 6,148

**Associate in Arts Program**
(Full-time students)

- 2010: 730
- 2011: 700
- 2012: 670
- 2013: 640
- 2014: 610
- 2015: 580
- 2016: 550
- 2017: 520
- 2018: 590
- 2019: 853

**Underrepresented Minority**
(Full-time students, Newark and AAP)

- 2010: 821 (14%)
- 2011: 850
- 2012: 881
- 2013: 912
- 2014: 943
- 2015: 974
- 2016: 1,005
- 2017: 1,036
- 2018: 1,067
- 2019: 1,719 (25%)
Growth in out-of-state undergrads

Newark Campus
(Full-time students)

International
(Full-time students)

Underrepresented Minority
(Full-time students)
Graduate College

- Centralize and lead graduate education
- Attract, retain and support outstanding students, especially those from diverse backgrounds
- Increase professional development, mentorship, career services, peer support, and health/well-being services
- Develop new interdisciplinary degree/certificate programs
- Signal that UD is serious about and committed to graduate education
- Coordinate and strengthen fundraising
- Create more opportunities at UD for undergraduate research and learning

Unidel Distinguished Graduate Scholars
- 24 doctoral students (2018 & 2019)
- $2.5M/year commitment from Unidel

Graduate Enrollment (Full- and part-time)
Reach out internationally

Sources of international undergraduates

Strategy to grow & diversify

- Increase undergrads by 1,000
- International admissions team visiting and recruiting in key markets in Asia, Latin America, Middle East, as well as niche markets in Africa and elsewhere

<table>
<thead>
<tr>
<th>Top countries, 2018-19</th>
<th>Undergrad</th>
<th>Graduate</th>
</tr>
</thead>
<tbody>
<tr>
<td>China, 805</td>
<td>China, 554</td>
<td></td>
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<td>India, 24</td>
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<td>Saudi Arabia, 19</td>
<td>Iran, 46</td>
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<tr>
<td>Malaysia, 8</td>
<td>Bangladesh, 43</td>
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</tbody>
</table>
Building our intellectual capital

Full-time Faculty

*Estimated
Celebrating our outstanding faculty

Tanisha C. Ford
Africana studies and history
Named to The Root’s list of the 100 most influential African Americans

Norman Wagner
Chemical & Biomolecular Engineering
Leading $11.8M NSF project to develop neutron spin-echo spectrometer for nationwide research

Salil Lachke
Biology
Five-year, $1.7M NIH grant to study genes related to eye disorders
DISRUPTORS
How UD is sparking new ideas to solve today’s problems

IN Inside
THE BALTIMORE COLLECTION
Students unlock hidden truths in artistic glass and have
P. 8
ART IN SCIENCE
A popular exhibit provides a springboard into UD discoveries
P. 20
INNOVATION IN MOTION
UD startup partners with Facebook to design a better sports bra
P. 31
Operating revenue

FY2010:
- Endowment: 5%
- Research: 19%
- State appropriations: 14%
- Tuition & Fees: 44%
- Housing & Dining: 12%
- Other: 6%

FY2018:
- Endowment: 4%
- Research: 15%
- State appropriations: 10%
- Tuition & Fees: 51%
- Housing & Dining: 12%
- Other: 8%
Investments yield consistent support

Investment Income as % of Total Revenue

- Texas A&M University System
- University of Virginia
- University of Pittsburgh
- University of Delaware
- Purdue University
- University of Michigan
- Michigan State University
- Pennsylvania State University
- University of North Carolina at Chapel Hill
- Ohio State University
- University of Minnesota
- Indiana University
- Iowa State University of Science & Technology
- North Carolina State University at Raleigh
- University of Utah
- Rutgers
- University of South Florida
- University of Arizona
- University of Illinois
- University System of Maryland
- Virginia Polytechnic Institute & State University
- University of Massachusetts
- State University of New York
- University of Connecticut
- Georgia Institute of Technology

0.0% 2.0% 4.0% 6.0% 8.0% 10.0% 12.0%
Expenses are capital-heavy

Capital Expenses vs. Operating Expenses as %

Texas A&M University System
University of Connecticut
University of Massachusetts
University of Delaware
University of Virginia
State University of New York
University of Pittsburgh
University of Arizona
Iowa State University of Science & Technology
Purdue University
Michigan State University
Ohio State University
Virginia Polytechnic Institute & State University
North Carolina State University at Raleigh
University of Michigan
Georgia Institute of Technology
University System of Maryland
University of Minnesota
Pennsylvania State University
Rutgers
University of North Carolina at Chapel Hill
Indiana University
University of Utah
University of Illinois
University of South Florida

0.0%  2.0%  4.0%  6.0%  8.0%  10.0%  12.0%  14.0%
Leaning more on endowment

Historical State Operating Appropriations as a Percentage of Operating Revenue

- State Operating Appropriations/Operating Revenue (LHS, percent)
- Endowment Spending Payout (RHS, Sthousands)
Keeping UD accessible and affordable

Tuition & Fees for Newark Campus Undergraduates

- Non-resident
- Resident
- Average Net Cost

2019-20 tuition & fees

Non-Resident
$35,710

Resident
$14,280

- $6,300 Avg. fin. aid*

$7,980 Resident average after fin. Aid*

*Estimated
Renewing our Delaware Promise

Objectives:

- Make financial aid simple to understand, assuring families that UD will be accessible and affordable when their children are ready to attend
- Attract and retain Delawarean students to UD
- Keep more graduates in Delaware so they contribute to state workforce and economy
- Continue increasing UD’s diversity and social mobility in alignment with institutional goals

Our proposal:

- Cover full tuition and mandatory fees for Delaware students whose family incomes are below $61,000, and laddered support above that
‘Finish in Four’ initiative

Growth of advising resources

- Blue Hen Success now available to all undergrads
- January through July
  - 22,000+ advising interactions with 11,500+ students
  - 900+ faculty/advisors/tutors — 10% increase since Fall 2018
- Fall semester so far
  - 1,500+ tutoring appointments scheduled
  - 8,500+ advising interactions

On track for on-time graduation

<table>
<thead>
<tr>
<th>Year</th>
<th>30+ credits in first year</th>
<th>60+ credits in first two years</th>
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<tbody>
<tr>
<td>2016-17</td>
<td>57%</td>
<td>62%</td>
</tr>
<tr>
<td>2017-18</td>
<td>61%</td>
<td>67%</td>
</tr>
<tr>
<td>2018-19</td>
<td>65%</td>
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</table>
High-impact experiences

53% Participate in service learning

71% Work in an internship, field experience or clinical placement

33% Study abroad

35% Work with faculty on a research project

53% Complete a capstone project, exam or portfolio

25% Live or work in a learning community

Students who participate in at least one high-impact experience:

93% UD

89% UD peer institutions

86% Association of American Universities
Integrating chemistry & biology

- Designed for a broad population of life science majors who simultaneously take introductory biology and introductory chemistry
- Integrates instruction and laboratory experiences
- Provides problem-based and experience-based learning opportunities
- Prepares students to collaborate, solve problems, communicate and reason scientifically across disciplinary boundaries
- Uses evidence-based practices in STEM education
- Provides professional development for peer mentors, graduate teaching assistants, preceptors and faculty
Global education initiative

- Renewing our commitment to international education and research
- Participating in American Council on Education’s Internationalization Laboratory for 2019-21, with 17 other colleges and universities
- Goal: Evaluate, shape and expand UD’s internationalization strategy to all parts of the world, amplifying our impact as an international university.
- Beginning now with a self-study to engage faculty, administrators, staff and students
Undergrads are ‘Driven to Discover’

Summer research projects in (l-r) toxic algae, Achilles tendons and beekeeping

udel.edu/home/driven-to-discover/
Great places enable great work
On the road to create a school of music
Art in Science
Enhancing the student life experience

- Doubled staff supporting underrepresented students since 2016
- Binge drinking at lowest rate since began tracking it in 1993
- 617 unique employers recruited on campus at 22 career events last year
- 42,035 unique opportunities listed by 6,998 employers in Handshake
Maker Network

- Connection of spaces, people and resources to encourage and support spirit of innovation, entrepreneurship and inclusive excellence
- Opportunities for new courses and degree programs
- Tools for Horn Entrepreneurship
- Maker Gym opening in Nov.; fully operational in Feb.
Horn Entrepreneurship

- About 2,000 students (105 different majors) enrolled in entrep. courses last year
- About 250 students are enrolled in entrepreneurship degree programs
- Start-ups supported by Horn got $7.4M+ in grants, awards and funding in FY19
- Coming: Expansion of EntreX Lab high school program
  - Professional development for teachers
  - Year-long curriculum
  - Dual enrollment for students
- Coming: Creation of neoFest
  - Statewide celebration of start-ups and tech
  - Launch in May 2020

“This major is equipped with action-packed materials to help students succeed, even if they don’t intend on starting their own business. Entrepreneurs are those who change and positively impact lives.”
— Eastwood Bempoh
Class of 2022
UDairy Creamery now making cheese

Charles A. Genuardi ’70 and Patricia Genuardi Food Innovation Laboratory

- 3,200 sq. ft. for dairy processing and cheese production, plus student test kitchen
Outcomes and Impact

People and Resources

Academic Experience
Leading our students to success

73% of UD students earn their bachelor's degree within four years—one of the Top 20 rates among public institutions nationwide.

95% of UD graduates are employed or pursuing further education six months after earning their bachelor's degree, compared to a national benchmark of 84%.
New journeys for first World Scholars

Class of 2019
- Studied abroad twice
- 87% four-year graduation rate, comparable to Honors Program
- Now working at Goldman Sachs, IBM, NBCUniversal, American Jewish Committee, Fortune Magazine, Globus Medical, etc.
- Three are teaching English abroad — one in Brazil, two in France
- One co-founded Project Divided, a multimedia campaign to bridge the divide between Americans of different political views
- One is in a Master’s program in Tourism Development and Culture run jointly by the University of Glasgow, the University of Malta, and the University Institute Lisbon
Alumni succeeding around the world

Martha Meaney-Murray
- Engineering, ‘87
- Surgeon at Boston Children’s Hospital
- Professor of orthopedic surgery at Harvard Medical School
- Founder of Miach Orthopedics — Pioneering new way to repair ACL injuries; raised $22.5M from investors, incl. NFL Players Assn.

Wang Xing
- MS Elec. Eng., ‘04
- Founder, chairman and CEO of Meituan Dianping (food-delivery service with 400M users in China)
- Company created in 2015 through merger of Meituan (like Groupon) and Dianping (like Yelp)
- Went public on Hong Kong Stock Exchange in 2018

Joe Chen
- Physics, ’92
- Pioneer in China’s Internet industry
- Founder, chairman and CEO of Renren, a social networking platform
- Previously co-founded ChinaRen, China’s first social network, in late 1990s.
High-profile media coverage

npr
Medium
Science
U.S. News & World Report
The New York Times
European Scientist
Forbes
FOX News.com
cienciaplus | europa press
Newsweek
An engine for economic impact

- Supporting $4.7B in economic activity and **33,320 jobs** in the Northeast Corridor
- In Delaware, $2.8B in economic activity, supporting **24,450 jobs**
- Serving the needs of corporate and nonprofit organizations in the fields of education, finance, health care, human services and more

FOR EVERY $1 INVESTED BY THE STATE, UD GENERATES $23 IN DELAWARE'S ECONOMY
Rankings recognize UD excellence

2019 Rankings

- 4th highest 4-year graduation rate (73%) among residential publics nationwide — Almanac of Chronicle of Higher Education
- Top 1.3% of universities in the world — Center for World University Rankings
- #39 among public universities — U.S. News
- Top 25 U.S. Colleges That Pay Off The Most — CNBC
- 16 graduate programs among 100 best in U.S. (11 in top 50) — U.S. News

Strategy going forward

- Review data to ensure accuracy
- Prioritize investments to improve instruction and access, which will in turn improve rankings

Remember …

- Rankings lag performance
- Methodologies change
  - Social mobility and Pell
- Data collection & definitions affect rank
- UD’s metrics usually steady or improving; rankings are relative
Middle States reaccreditation

Standards of the Middle States Commission on Higher Education

An accredited institution of higher education …

... Has an appropriate mission,
... Lives it with integrity,
... Delivers an effective student learning experience,
... Supports the overall student experience, both inside and outside of the classroom
... Assesses its own educational effectiveness
... Uses planning and resources to ensure institutional improvement
... Is characterized by effective governance, leadership, and administration
Middle States reaccreditation

Self-Study Process

- 18 months, begun in summer 2019
- Guided by Self-Study Steering Committee
- Working groups focused on each standard: Gather evidence showing how UD meets the criteria for each standard; identifying gaps in evidence; and write a report that addresses the standard.
- Surveys for entire UD community to offer input
- Town hall meetings planned for April 10th, 17th and 24th
- Steering Committee finalizes the self-study narrative in 2020
- Middle States External Review Team visits in spring 2021
Strategic Plan: A Living Document

- Draft open for public comment, Sept. 10-23
- Builds on previous strategic plans
- Aim to be both practical and ambitious
- Align daily decisions with long-term goals
- Critical for Middle States self-study process
- Commitment to update as needed in the future

udel.edu/strategicplanning
Campus Master Plan

Catalytic Initiatives

**STRENGTHEN THE STUDENT ARC**
- Transform Morris Library as an intellectual commons
- Expand undergraduate opportunities at STAR and other campus sites
- Align student housing to reinforce sense of community

**ACCELERATE INTERDISCIPLINARY RESEARCH AND INNOVATION**
- Create new spaces that enhance academic collaboration (‘network of new spaces’)
- Evolve space management policies and planning to align demands and shared resources

**STIMULATE NEW PARTNERSHIPS**
- Expand opportunities for industry, private business and outside organizations
- Highlight P3 initiatives to accelerate capital vision
Campus Master Plan

Investing for Long Term Impact:

The campus plan positions the University’s land holdings for smart and strategic growth:

- Reinforce the distinctive character and unique scale of the central campus
- Enhance UD’s position and competitive advantage in the region
- Establish a comprehensive real estate strategy
- Integrate full campus land holdings
- Prioritize sites that advance strategic goals
- Reserve lands for longer-term opportunities
Securing resources for the future

Campaign Goal: Raise $750M by 2020
Raised As of Oct. 2, 2019: $728.5M
Challenges & Opportunities Ahead
Demographic shifts

“Migration and differences in fertility have driven the population away from New England and the Northeast to the Hispanic Southwest. There are fewer kids overall, and where those kids are doesn’t match up with our traditional recruiting markets.”

— Nathan Grawe, economics professor at Carleton College in Minnesota, author of *Demographics and the Demand for Higher Education*

87% of UD applicants come from 8 states

Other U.S. — 4.6%
International — 8.5%

40% of UD’s peer institutions did not meet their enrollment target by July 1 this year.

— 2019 Survey of College & University Admissions Officials, Inside Higher Ed
Disruption and consolidation

“I think 25% of schools will fail in the next two decades. They’re going to close, they’re going to merge, some will declare some form of bankruptcy to reinvent themselves. ... I think we’re going to see, basically, faster and cheaper programs emerge. I also think we’re going to see a lot of mobile learning programs come up, where you can literally just pop on your phone, learn a few things. And so I think we’re going see a lot more of these sort of flexible, affordable, convenient programs.”

— Michael Horn, co-founder and distinguished fellow at the Clayton Christensen Institute for Disruptive Innovation, on CBS This Morning, August 2019
Technology changes education

Rapid advances
- Artificial intelligence
- High-speed mobile Internet & cloud technology
- Virtual reality
- Big-data analysis
- Discoveries in Neuroscience

Impact
- How students learn
- Who teaches them
The workplace of the future

Five changes and what they’ll mean for jobs in the next 20 years...

1. Artificial intelligence and robotics will ultimately create more work, not less.
2. A shortage of skilled, talented workers is more likely than a shortage of jobs.
3. The growing prevalence of remote work will pit cities against each other for talent.
4. The majority of the workforce will freelance by 2027.
5. Technological change will keep increasing, so learning new skills will be an ongoing necessity throughout life.

Insights from Stephanie Kasriel, CEO of Upwork, at the World Economic Forum Annual Meeting, 2019
Liberal arts and lifelong learning

“A student’s undergraduate experience—and how well the experience advances critical learning outcomes (knowledge of human cultures and the physical and natural world, intellectual and practical skills, personal and social responsibility, integrative and applied learning)—is what matters most, with 80% of employers agreeing that all students need a strong foundation in the liberal arts and sciences.”

—Lynn Pasquerella, president of the Association of American Colleges and Universities, in Harvard Business Review

Today’s college graduates

- 20 jobs in five different industries over their working lives
- Ability to put knowledge in context and use it to solve problems
- Think critically and creatively
- Collaborate
- Communicate
- Approach challenges with an entrepreneurial mindset
Liberal arts education pays off

Salaries by college major

- STEM majors
- Humanities and social science majors

<table>
<thead>
<tr>
<th>Age 23-25</th>
<th>Age 40</th>
</tr>
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<tbody>
<tr>
<td>$61,744</td>
<td>$124,458</td>
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<tr>
<td>$45,032</td>
<td>$131,154</td>
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"In the Salary Race, Engineers Sprint but English Majors Endure"

For students chasing lasting wealth, the best choice of a college major is less obvious than you might think.

The conventional wisdom is that computer science and engineering majors have better employment prospects and higher
What’s next?

What are the three biggest strategic opportunities ahead over the next 20 years?

What is UD known for in 2040?
Board of Trustees Retreat

President Dennis Assanis

October 3, 2019