ANNUAL REPORT

TO THE UNIVERSITY OF DELAWARE FACULTY SENATE

SEPTEMBER 2022

UNIVERSITY OF DELAWARE
GRADUATE COLLEGE

The Graduate College's new strategic plan guided our work last year and increases the transparency of our ongoing activities. The Annual Report provides an opportunity for the college to share the progress we have made as a university toward excellence in graduate education and research. While reporting on the efforts of the Graduate College over the last year, we acknowledge the significance of the University-wide planning activities that culminated in the refresh of UD's strategic plan, "Forward and Forever," last spring. We recognize the profound role we need to play in achieving the objectives of "Forward and Forever."

Louis F. Rossi
Dean, UD Graduate College

THE GRADUATE COLLEGE
ANNUAL REPORT TO THE UNIVERSITY OF DELAWARE FACULTY SENATE

INTRODUCTION

The Graduate College was created in 2019 to pursue new opportunities for graduate education at the University of Delaware and to fill gaps in the needs of our graduate students and postdocs. The Graduate College is still growing into its new role and has achieved a number of objectives despite the pandemic and while absorbing the same budget cuts and layoffs as other units on campus. The Division of Professional and Continuing Studies (UD PCS) is a part of the Graduate College, and many elements of UD PCS' mission, especially the delivery of online learning and serving part-time graduate students, overlap with graduate education. The other parts of UD PCS' mission focus on serving nontraditional undergraduate and lifelong learning students. This report summarizes Graduate College activities over the last academic year.

While reporting on efforts of the Graduate College, we acknowledge the significance of the Universitywide planning activities that culminated in the refresh of UD's strategic plan, "Forward and Forever," last spring. We recognize the profound role we need to play in achieving the objectives of "Forward and Forever." Throughout this report, the alignment of the Graduate College's goals and many of those of "Forward and Forever" are evident. Specifically, we have been using matching resources to make us more competitive when applying for training and foundation grants to advance the objectives in the first pillar, "Expanding Student Access & Success." These efforts make limited resources go further. Similarly, by supporting graduate students and postdocs from marginalized populations, engaging with our community-based graduate student organizations, and fostering partnerships with minority-serving institutions, we advance the aims of the second pillar, "Building a Social Justice Foundation to Support a Diverse, Inclusive & Intercultural Campus." As a home for seven faculty-driven interdisciplinary programs, as well as other interdisciplinary initiatives, we advance the aims of the third pillar, "Expanding Interdisciplinary & Global Opportunities." The successful online partnerships that are the hallmark of the services provided by the PCS and

UD Online teams advance the objectives of the fifth pillar, "Reimagining Intellectual and Physical Capital for a Sustainable & Boundless Campus." These are examples of the many ways that the Graduate College's strategic goals align with UD's strategic pillars.

Our Mission

The mission of the Graduate College is to achieve excellence in graduate education and graduate research, scholarship and creative expression at the University of Delaware. In doing so, the Graduate College will elevate the stature of our graduate programs nationally and internationally.

Our Vision

Established in 2019, the University of Delaware Graduate College is an expression of the will of the faculty and administration at the University to dedicate itself to the needs and aspirations of our graduate students and postdocs. We will advocate for our graduate students' and postdocs' success and well-being in all parts of their

lives on and off campus. The Graduate College will enhance graduate experiences by:

▶ building a welcoming, respectful, strong, diverse and resilient graduate community,

▶ fostering innovation in graduate education, especially in creating and supporting interdisciplinary programs, delivering online courses and programs, and extending educational opportunities to nontraditional learners,

▶ providing opportunities for professional development so that graduate students and postdocs can achieve their career aspirations,

▶ recruiting and retaining the best and brightest students,

▶ supporting, developing and enhancing opportunities for graduate and postdoctoral research, scholarship and creative expression.

We place the highest value on our common humanity, and therefore we will reflect and act upon issues of diversity, equity and inclusion in the decisions that we make. Operational excellence and operational continuity will be our guiding organizational principles. Best practices, data and evidence will inform all our actions, and we will maximize our impact by working harmoniously with the Graduate Council, the University's other colleges and units, and partners from outside the University.

Our Strategic Plan

To most efficiently take advantage of the opportunities that lie before the Graduate College, we recognized the need for a strategic plan to capture the aspirations of our students and the expectations of our faculty and administration. As such, Graduate College administrators, in consultation with the Graduate College Council, began drafting a strategic plan in fall 2020 that focused on the five goals articulated in our vision statement. The plan accounted for feedback collected from five working groups of faculty and students and reflects a consensus of the UD community's priorities.

Completed and formally shared with the UD community in November 2021, the Graduate College Strategic Plan outlines the ways in which the Graduate College will achieve its mission and will measure its progress in meeting its vision. Like any good strategic plan, we have been mindful to propose something that is both

ambitious and achievable. We do not expect everything we try to work as planned, but we are confident that these endeavors will create the capacity within our community to achieve the excellence that we aspire to. As the Graduate College continues to address work requests and other challenges associated with serving graduate students and postdocs, we will use this strategic plan to maintain our focus.

To promote transparency, the Graduate College has shared the plan publicly. It is available via a special section on the Graduate College website and can be downloaded as a stand-alone PDF. What's more, since execution of the items proposed in the strategic plan lays the foundation for reporting on the Graduate College's accomplishments, this annual report follows the general structure of the strategic plan. While a strategic plan is a living document, the plan articulates action items on a broad five-year timeline including immediate action items for the AY21-22 academic year. We succeeded in executing most, but not all of these items, and many of these accomplishments are highlighted in this report.

Action items that we had hoped to finish during AY21-22, but did not complete, will be finished in the upcoming year.

Two top priorities in this category include:

▶ **Program Director's Manual** — The University of Delaware has over 200 graduate programs, yet program directors lack an authoritative document to help them understand their role. We have a draft document that is undergoing substantial revision, and we plan to have a review copy in front of seasoned program directors in the fall semester.

▶ **Stakeholder Survey** — We had planned to deploy a stakeholder survey to faculty and students to better understand whether we were meeting everyone's needs. This will be accomplished next year.

ACHIEVING EXCELLENCE WITHIN GRADUATE COLLEGE OPERATIONS

Building and Strengthening Relationships with other Colleges and Units

Graduate College

The Graduate College is committed to working collaboratively with other colleges and units to achieve our objectives. To facilitate this collaboration, Graduate College leadership has built new and strengthened existing relationships across campus through the creation and/or extension of formal groups tasked with addressing graduate education needs. The deans at the University of Delaware enjoy a collaborative relationship, meeting regularly and working closely with the provost, president and other units on campus. The Graduate College has particularly close relationships with the Office of Student Life and the Research Office. The Office of Student Life has been a problem-solving partner as we transition from a campus designed almost exclusively for undergraduates to a campus designed for a dynamic combination of undergraduate and graduate students. The Research Office has been an outstanding partner in helping teams of faculty pursue and deploy graduate training grants. Descriptions of these groups are provided below.

▶ The Graduate College Council (GCC) acts as the primary deliberative and representative body of the Graduate College. Consisting of 35 faculty members who are nominated and elected as the representatives of graduate programs within the academic colleges, as well as one graduate student from each college, the council acts in accordance with the Graduate College bylaws and in harmony with the Graduate College staff. The GCC convenes monthly. More information on the GCC's committees can be found on the GCC website.

GCC accomplishments in the last year include:

- Vetting and revising the Additional Work policy

- Creation of the Evaluation Science program

- Creation of the Quantum Science and Engineering program

- Student-parent support task force

▶ Graduate program directors are a crucial part of the graduate education infrastructure at UD. The Graduate College convenes meetings with the program directors every month. The purpose of these meetings is to provide up-to-date information relevant to the day-to-day management of graduate programs and share best practices on recruitment, retention and support of graduate students among the graduate program directors.

▶ The Graduate Inter-College Advisory Committee (GICAC) connects all colleges with graduate programs to the Graduate College. The purpose of this working group is to share information and resolve Universitywide challenges related to budget, graduate program administration, marketing and promotion of programs, employment policy and other items outside the domain

of academic programs and education. It also gives deans' offices the opportunity to provide input on crosscutting issues like the Additional Work policy. Examples of the work done by this committee include ways we can work to move more students to 12 months of support, exploring GradSERU data focusing on climates within each college broken out by demographic groups, strategic discussions about the direction of the EAB online marketing campaign and other matters of Universitywide interest.

Division of Professional and Continuing Studies

Serving as the adult and nontraditional learners' portal to the University of Delaware, the University of Delaware's Division of Professional and Continuing Studies (UD PCS) provides educational opportunities for anyone seeking to begin or complete their college career, enhance their professional skills or enrich their personal life. Also providing customized training and educational services to area businesses, organizations and professional associations, UD PCS impacts more than 16,000 students each year through UD credit courses and degree offerings, professional development courses, certificate programs, specialized conferences, workshops and lifelong learning member cooperatives throughout the state.

As building cross-campus relationships is a critical component of UD PCS' model of providing just-in-time education to a diverse population of learners, the division's noncredit professional development team continues to partner with the Lerner College of Business and Economics, the College of Engineering and the College of Agriculture and Natural Resources to deliver high-quality customized, grant-funded, and open enrollment professional development programs for industry, government and nonprofit professionals. Programs of note include:

▸ the Emergency Poultry Disease Response and Regionalization program, attended by veterinarians, researchers and agriculture leaders from across the globe, funded by an annual grant from the U.S. Department of Agriculture

▸ the Patient Experience Academy for Veterans Administration of Wilmington medical personnel

▸ the ChristianaCare Certificate in Healthcare Leadership

▸ the fully online Pocket MBA for ChristianaCare and Incyte Corporation

Additionally, each year UD PCS receives a grant from the Office of the Governor to hold the Governor's School for Excellence for 125 rising high school juniors from across the state. The students are nominated by their schools to attend the weeklong gifted and talented, campus-based program with tracks in the arts, music and academics. For the July 2022 Governor's School offering, UD PCS collaborated with the following units and colleges:

▸ Alfred Lerner College of Business and Economics
  - Exelon Trading Center

▸ College of Agriculture and Natural Resources
  - Applied Economics and Statistics

▸ College of Arts and Sciences
  - Department of Theatre
  - English
  - Fashion and Apparel Studies
  - School of Music
  - Visual Arts

▸ College of Earth, Ocean and Environment (Cannon Lab)

▸ College of Engineering

▸ College of Health Sciences
  - Kinesiology and Applied Physiology

▸ Horn Entrepreneurship

▸ Joseph R. Biden, Jr. School of Public Policy and Administration

Furthering UD PCS' approach to relationship-building and collaboration, UD's Osher Lifelong Learning Institutes (OLLI) in Wilmington and in Kent and Sussex counties have continued their longstanding partnerships with UD departments and programs that allow graduate students to teach classes or provide lectures for OLLI members. For example, each year graduate students from the Center for Material Culture Studies, the Department of Music and the Master of Arts in Liberal Studies (MALS) program lead classes based on their research and/or performance skills at OLLI Wilmington or via OLLI Online. Similarly, graduate students from the College of Earth, Ocean and Environment lead courses about climate change and maritime topics to OLLI Kent and Sussex members. The college's Sea Grant Program also invites OLLI members to its Ocean Currents lecture series each summer.

Bolstering Support for Graduate Programs in Need

The Graduate College has maintained its commitment to promoting the value of University of Delaware graduate education and, in turn, works with campus representatives of graduate programs to address urgent issues related to market demand/program outlook, student funding, graduate education promotions and more. Additionally, based on identified staffing needs in relation to campuswide support requests, Graduate College leadership has strengthened the college's service team by creating new roles and hiring additional team members.

Market Research for New/Existing Programs

To assist with informing faculty, chairs and deans about the market demand and potential viability of given programs, job availability associated with graduate programs and regional program competition, the Graduate College hires up to two graduate students per year from the Lerner College of Business and Economics to serve as market researchers. Since 2019, we have conducted more than 70 market research studies, 14 of which were completed in the most recent academic year. These reports have both bolstered the case for new master's degrees or indicated the market is not attractive for new degrees thereby saving scarce college and department resources for other important purposes. Individual market research reports from third parties cost between $5,000 and $20,000 per report, so our investment in our graduate students yields more reports annually than hiring outside consultants.

Promoting University of Delaware Graduate Education

Graduate program support efforts also include various marketing and communications functions that aim to increase overall awareness of—and ultimately enrollments in—UD graduate programs. Details regarding these marketing and communications efforts are presented in the "Recruiting and Retaining the Best and Brightest Students" section in this report.

Aligning the Graduate College office with Campuswide Needs

Since the official launch of the Graduate College, college leadership has been monitoring service-based workload and related feedback from campuswide stakeholders.

Retirements and workforce reductions during the pandemic reduced the size of the Graduate College team. We saw this as an opportunity to re-task some positions to better meet the needs of our University. Net overall losses in positions to date are in the realm of information technology and finance. We eliminated an administrative position and created a new role, operations advisor, to provide the necessary follow-through on Graduate College operations and high-level administrative functions. These tasks include supporting our various constituencies, including GICAC, the GCC, the Graduate Services Network and the Graduate College Advisory Board, as well as providing oversight to formal events like the Doctoral Hooding and New Graduate Student Orientation. Growth has focused on areas of support for graduate students and graduate programs. The Graduate College hired a graduate services specialist into our professional development portfolio to provide career counseling and professional development support. The Graduate College provides professional development and career navigation support for over 4,000 graduate students, and this hire doubles the size of our professional development team, from one to two. We also hired a program coordinator to support the successful National Research Training (NRT) grant and a graduate services coordinator into our academic portfolio to support students and faculty in our seven interdisciplinary programs. We lost one graduate services coordinator last year, so we are searching for one and possibly two more people in this role to support our growing programs.

Strengthening Insight and Decision-Making through Communications and Data Sharing

Focused, frequent and easy-to-follow communications from the Graduate College to our stakeholders is critical. As such, Graduate College leadership has worked to streamline communications and information sharing with students, staff and faculty over the past year. Specific communications and data-sharing initiatives and tactics are listed below.

▶ **Graduate College Newsletter** — Issued biweekly via email, Graduate Student News serves as UD's graduate-focused information aggregator that replaces the need for multiple emails per week. The newsletter provides information on student fees, stipends, health and well-being, events, awards and fellowships, internships, student life, student profiles, campus news, and more. Approximately 41% of email recipients open/read the emailed newsletters, and approximately 7% of the readers click links. During the last academic year, 1,079 people visited newsletter pages on the Graduate College website.

▶ **Graduate Dashboard** — The dashboard provides accurate time-series data at the college and program level. Available to all program directors for more than a year, it has received a number of minor upgrades. The most significant augmentation is the funding tab that allows directors to explore the numbers of graduate TAs, RAs, GAs, fellowships and sustainers.

▶ **Town Halls** — During the 2020-2021 academic year, the Graduate College hosted monthly town halls open to all graduate students and postdocs. These meetings were useful for answering questions, sharing data and addressing concerns. For example, graduate students on contract are routinely confused about when they should be treated as students and when they should be treated as employees when accessing services on campus. We formed a working group consisting of students, an HR rep and the Graduate College team to write a guide clarifying their status in all possible circumstances on campus. We noticed that the same graduate students were attending and that we were not reaching all the populations of students that we were interested in hearing from. When we hosted a town hall just for postdocs, it was very well attended and highlighted some of their distinct needs. During the fall of 2021, we continued with the open format but transitioned to a new format where we would invite subgroups of graduate students to partner with us. We still host open town halls once per semester, but other monthly slots are reserved for a collection of focused populations, in part driven by our analysis of GradSERU data. For instance, we met with the master's students in the spring. The vision is that we will partner with student organizations to structure these sessions to best meet their interests and needs. Going forward, we hope to co-organize listening sessions with Black graduate students, Hispanic/Latinx graduate students, women in STEM and any other interested groups.

▶ **Graduate Admissions Report Year-Over-Year** — The newest dashboard is the Graduate Admissions Report Year-Over-Year, which provides live "race-track" summaries of graduate applications, including offers of admissions and acceptances, broken out into several subcategories, so that graduate program directors have historical context in their admissions campaigns.

▶ In addition, the Graduate College's systems and data analyst provides weekly email updates throughout the spring that analyze the current data and put international recruiting in the context of current trends in consular wait times.

▶ The dean of the Graduate College is committed to being accessible and responsive to graduate students and their representatives in the Graduate Student Government. The Graduate dean meets monthly with the president of the Graduate Student Government and holds regular town halls with the graduate students.

Formal Tracking of Graduate College Non-Degree Students

The past year saw continued growth of part-time, non-matriculated graduate students who take up to nine credits of graduate coursework prior to applying to a graduate degree or who are enrolled in specialized education certificate programs in the College of Education and Human Development. UD PCS' Academic Advisement, Student Services, Registration and Career Counseling (ACCESS) Center served just over 200 such students in the 2021-22 academic year. These students are now categorized and tracked using the Graduate College Non-Degree (GCND) classification, which helps UD better distinguish part-time graduate students from part-time undergraduate students (Continuing Education Non-Degree students.) In addition, GCND students now receive a graduate transcript that shows their coursework rather than an undergraduate transcript like they used to receive prior to the GCND designation.

Data Gathering from gradSERU

The University of Delaware has participated in the Graduate Student Experiences in the Research University (gradSERU) survey since 2017. This survey, administered to all graduate students every two years, allows UD to learn more about the experiences of our students in order to inform decisions relevant to their needs. While there has been some data analysis on the data from past years,

more intentional efforts have been made to share the 2019 and 2021 data broadly to encourage greater use across campus.

For the most recent survey (2021), the Graduate College partnered with the Delaware Environmental Institute (DENIN) to have an applied economics master's student analyze the data. Further, given Tableau-based dashboards are now provided by the SERU Consortium, graduate program and college leaders are able to dive into their own data to identify areas of pride and opportunities for improvement.

The UD student wellness leaders have also started using gradSERU data as they examine graduate student needs and how they can provide resources to better support graduate students.

UD's efforts to encourage campuswide use of gradSERU data have been recognized by the larger SERU Consortium, as Graduate College Senior Assistant Dean LaRuth McAfee was invited to serve on a panel at the June 2022 SERU Symposium to share these efforts with other consortium members. In 2022-23, the Graduate College plans to target one or two colleges at UD to support intentional interventions and transformations based on gradSERU data to model opportunities to other units at UD.

ENHANCING GRADUATE EXPERIENCES THROUGH COMMUNITY BUILDING

The University of Delaware Graduate Student Population

To understand our graduate student community, it is important to understand our graduate student population.

One of the important features of our graduate student community is that roughly half of our graduate students are seeking doctoral degrees and half are seeking master's degrees. The vast majority of online students are seeking master's degrees. In Figure A, we can see trends in our graduate population over time by degree type. Despite COVID impacts, 2021 saw an increase in graduate enrollments. Doctoral enrollments are tied to research faculty mentors, and the growth was modest. Nonetheless, COVID impacted this group the greatest by delaying degree completion for many during the lockdown when field research and lab access was limited. Most of the recent growth in graduate enrollments is driven by master's degree programs. The emergence of non-degree students in our statistics in 2020 is because we started keeping track of Graduate College Non-Degree (GCND) students in that year.
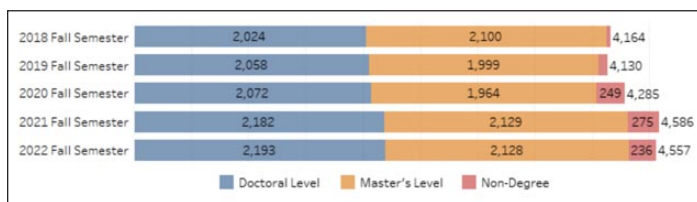
Figure A. Distribution of graduate students by program type.

However, the graduate community is not uniformly distributed across the colleges. In Figure B, we can see that graduate populations vary considerably across each college. The typical graduate student in the Lerner College of Business and Economics, for instance, is a master's student. The typical graduate student in the College of Engineering is a doctoral student. Furthermore, these populations are dynamic. For instance, the growth in population in the College of Agriculture and Natural Resources is mostly due to an increase in master's students.
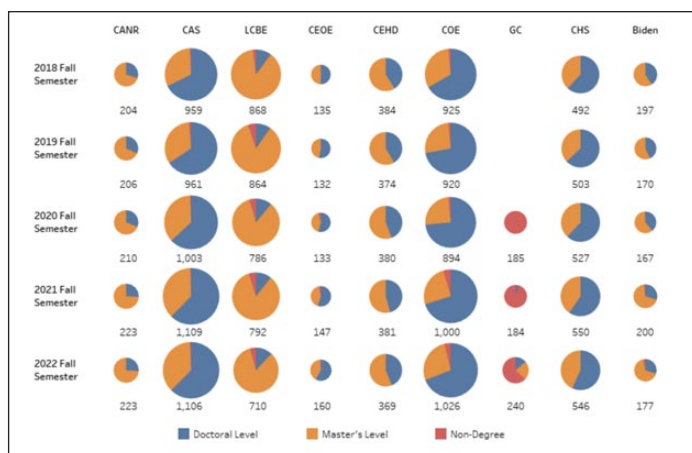
Figure B. Distribution of graduate students by program type across each college. The size of each disk represents the graduate population size.

Diversity can be viewed many different ways. The overall graduate population at UD is close to gender parity, but this is not the case at the college level as shown in Figure C. Furthermore, there is very little movement in gender diversity at the college level except for the College of Education and Human Development where the percentage of females has continued to increase over the last few years. There is considerable interest in the diversity of our population with regard to race and ethnicity. Of particular interest are the categories of underrepresented minorities (URM). We use the nationally accepted Integrated Postsecondary Education Data System (IPEDS) definition of URM, which is "Domestic Underrepresented Minority." These are U.S. citizens and permanent residents who identify as Black, Hispanic, Native American Indian, Hawaiian or Other Pacific Islander. In Figure D, we break these out in terms of absolute numbers and by proportion of college populations. Overall, the number of international graduate students dropped during the pandemic due to travel restrictions and visa backlogs. With the rollout of the vaccines, changes in approach to student visas by the Department of State, and other political changes around the world, 2021 saw a rebound in international applications, acceptances and matriculations at UD. Regarding our domestic students,

both URM and non-URM student populations have grown together. Diversity at UD is a top priority and a key element of both the UD and Graduate College strategic plans. Examining the URM population as a fraction of our overall population of U.S. citizens and permanent residents in Table A, we are making steady progress even through the pandemic terms.
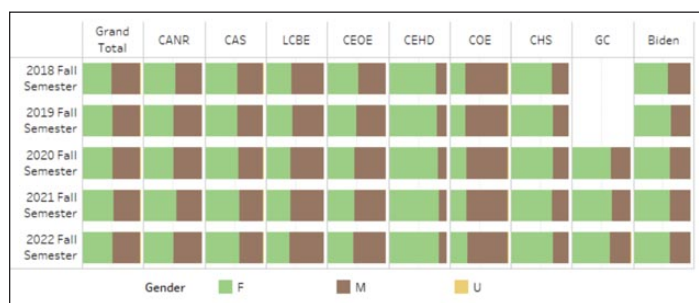
Figure C. Gender diversity for the full graduate population at UD and broken out by college.
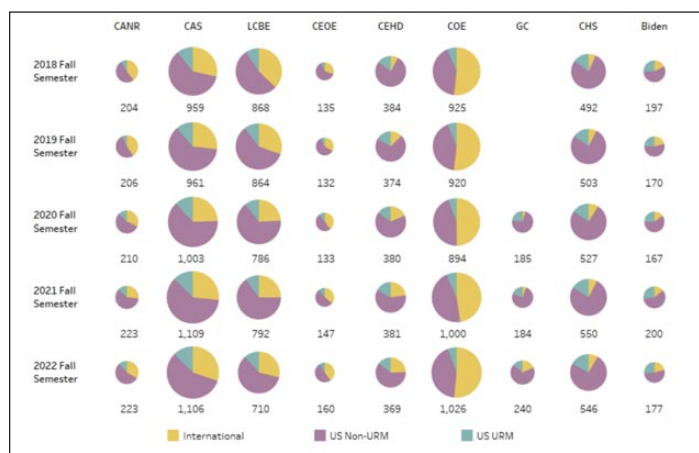
Figure D. The graduate population overall and within each college, broken out by URM, U.S. non-URM and International.

Fall of	2018	2019	2020	2021	2022
% URM (all grad)	10.9%	11.2%	12.2%	12.6%	12.0%
% URM (US cit/PR)	15.8%	16.0%	16.7%	17.3%	17.5%

Table A. Percentage of URM students as a fraction of total graduate student population and as a fraction of U.S. citizen and permanent resident graduate student population.

Understanding and Addressing the Needs of Graduate Students

Through the meetings and other communications mentioned above, Graduate College leadership continues to identify and address concerns shared by graduate students, staff and faculty.

Minimum stipends — During the last academic year, many graduate students and faculty expressed concern that minimum stipends were not keeping up with the growing cost of living. When students receive an assistantship or a fellowship from the University, they must receive at least the minimum stipend. The minimum stipend evolves over time from competing influences, including making our programs competitive with graduate programs of comparable quality and providing graduate students with a living wage. While it is adequate for most graduate students to live on, there can be no guarantee it will meet all needs and all circumstances. Roughly two-thirds of the graduate students on contract at UD earn more than the minimum stipend.
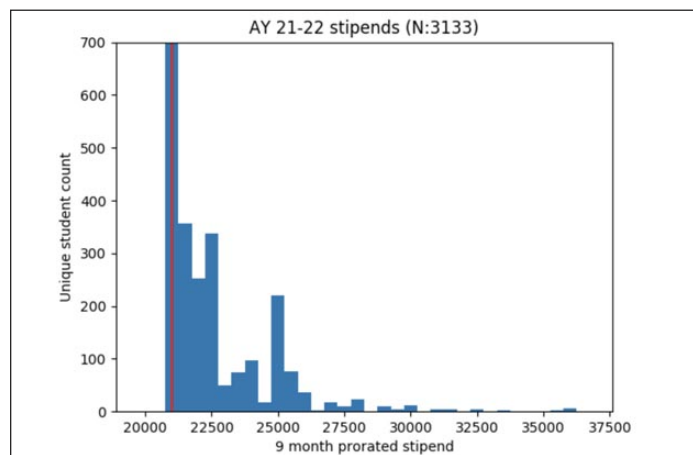
Figure E. Graduate stipend rates at UD. Each data point represents an individual student contract and their stipend pay rate normalized to nine months, rather than the actual amount they were paid during a calendar year. The minimum is marked in red. There are 1810 unique students represented.

We can use the **Consumer Price Index (CPI) for the Mid-Atlantic region** as a benchmark for the cost of living in our part of the country. The CPI is the cost of a basket of goods. The basket remains constant, so the CPI in year n and month m reflects the actual cost in year n and month m, and takes into account the regional economy and inflation (**more information here**). The ratio of our stipend to the CPI is a measurement of the purchasing power of our stipend in the contemporary economy. If that ratio

remains constant, our stipend rises with consumer prices, so presumably students will neither be getting ahead nor falling behind. A positive number means that the living conditions of graduate students are improving relative to the year before.

To understand our situation, Table B summarizes the current data on our minimum stipend together with CPI and how it has been evolving. We also include the NIH Ruth L. Kirschstein National Research Service Award (NRSA) Stipends, which are 12-month stipend levels, converted to a nine-month stipend for comparison with our minimum. From 2012 to 2019, our graduate student compensation had been improving relative to the local economy, with one exception in 2014. Our stipends grew strongly in AY17-18, AY18-19 and AY19-20, where the stipend to CPI ratio reached its highwater value of 81.9. The colleges moved to increase the stipend aggressively again, though the pace of inflation is a challenging factor.

Academic year (Fall)	Minimum stipend (9 month)	YOY change	Mid Atlantic CPI (Sep)	YOY change	Stipend to CPI ratio	YOY change	NRSA (9 month)
2012	$16,500	3.13%	231.407	1.99%	71.303	1.11%	
2013	$16,850	2.12%	234.149	1.18%	71.963	0.93%	
2014	$17,050	1.19%	238.031	1.66%	71.629	-0.46%	
2015	$17,500	2.64%	237.945	-0.04%	73.546	2.68%	$17,190
2016	$18,000	2.86%	241.428	1.46%	74.556	1.37%	$17,532
2017	$19,000	5.56%	246.819	2.23%	76.979	3.25%	$17,883
2018	$20,000	5.26%	252.439	2.28%	79.227	2.92%	$18,243
2019	$21,000	5.00%	256.558	1.63%	**81.853**	3.31%	$18,612
2020	$21,000	0.00%	260.280	1.45%	80.682	-1.43%	$18,990
2021	$21,000	0.00%	274.310	5.39%	76.556	-5.11%	$19,377
2022	$22,000	4.76%	N/A	N/A	N/A	N/A	$19,764

Table B. Summary of UD's minimum stipend against the mid-Atlantic consumer price index and the NIH benchmark. All stipends are prorated to nine months.

Health insurance – All graduate students are required to have Affordable Care Act compliant health insurance, and UD offers a plan that students can purchase. Every year, we renegotiate the plan with graduate student input. The graduate students like the current plan and wanted to keep the benefits the same at a similar price point. For the upcoming year, the graduate student health plan, administered by Aetna, had a rate increase of just $19 from $397 per year to $416 per year. As has been the case in previous years, the University will continue to pay for 86% of graduate students' health insurance. Graduate students pay 14% of the actual cost.

Tuition and fees – Regarding tuition, fees and other expenses, tuition rates for both undergraduate and graduate programs are increasing by 3%. The most common $950 rate is rising to $979 per credit. There are a small number of exceptions for graduate students in online accounting practice, applied statistics, international business, MBA and MPA, which are under a separate contract and will not change next year. Following the 3% campuswide increase in tuition, sustaining fees for doctoral students are going up from $1,118 to $1,152. The campus center and well-being fees remained constant despite inflation. The international fee has gone up by $10, from $170 to $180 per semester.

Housing – The housing market in and around Newark is tight for graduate students and postdocs. There are ongoing conversations about how best the University and the Graduate College can relieve some of the pressure on the rental market. Different approaches are possible, including building some graduate student housing, partnering with developers, partnering with existing apartment complex owners and raising the minimum stipend. Each approach has significant implications on the city of Newark and surrounding communities. These are ongoing conversations.

Fostering a Student-centered Graduate Culture and Increasing Involvement in Graduate Student Life

Success in graduate school is dependent on a number of factors, and the Graduate College is committed to ensuring that student experiences at the University of Delaware are both professionally and personally rewarding. As such, we are continuing to foster a graduate student-centered culture and increase involvement in graduate student life activities.

New Graduate Student Orientation and the Canvas-based Online Portal

The Graduate College emerged from the pandemic stronger in many ways, including the way that we greet our new graduate students. As campus reopened in the fall of 2021, the Graduate College decided to reimagine New Graduate Student Orientation (NGSO) as a dynamic, interactive event on the main campus. Students were introduced to essential services on campus. Orientation also included keynote lectures, student panels and a resource fair where students could meet graduate student leaders. For fall 2022, we refined the event further by differentiating student panels for specific audiences of students: doctoral/master's; STEM/humanities/arts/social sciences and professional students.

In fall 2020, New Graduate Student Orientation (NGSO) was moved online using the Canvas platform and Zoom. This resource was seen by students as an enduring asset after the orientation event, so we have continued to maintain it and update as a reference. Working with UD's instructional designers, it was updated to make sure it complied with disability and accessibility guidelines as well as with image copyright requirements. The look and feel was improved, and we invested significant effort in making as much of the site evergreen as possible. The new site was made "UD public" so that anyone with the link and UD credentials could access it. By making it "public to UD," we were able to meet the multiple access requests from staff and faculty, which allowed them to view the content without adding a burden to the Grad College administrative team. Also, it makes the site easier to share in general, and therefore offers a better resource for our nontraditional, online and part-time graduate students.

The Graduate College will continue to refine NGSO and the Canvas experiences based on program needs, student post-NGSO surveys and professional advice from our instructional designers.

Graduate Diversity Programming

The Graduate College continued supporting graduate diversity programming in 2021-22 with an emphasis on campuswide community-building initiatives targeting graduate students from underrepresented/marginalized backgrounds. In 2021-22 the college hosted more than 30 events attended by 270 different people, including 204 graduate students. Notable new events included the first annual Womxn of Color Retreat and semesterly events that recognize students who have passed milestones or received awards to mark the importance of these achievements and celebrate accomplishments with students.

Additionally, the Graduate College launched a weekly writing group in summer 2022 to support students through the task of writing their theses, articles or other major documents. Further, faculty research seminars featuring faculty from underrepresented racial or ethnic backgrounds and/or faculty who do research relevant to those populations have been valuable opportunities to introduce graduate students to faculty from similar backgrounds and learn more about the breadth of research taking place at UD. Faculty presenters in 2021-22 included Roderick Carey (education), Pascha Bueno-Hansen (women and gender studies/political science and international relations), Jaehee Jung (fashion and apparel studies), Theodore Davis (political science and international relations), and Colette Gaiter (art).

The Graduate Diversity Programming Initiative additionally continued its successful faculty of color panel series in

2021–22. Panel topics were "Black Men in Academia" (featuring College of Engineering Dean Levi Thompson), "Racial Diversity in STEM," "Black and Afro-Latinx in Academia," "Queering and Browning of Academia" (featuring Vice Provost for Libraries and Museums Trevor Dawes), and "Latinx in Academia" (featuring Biden School Dean Maria Aristigueta). Along with the research seminar series, these panels serve as opportunities for graduate students and postdoctoral researchers to meet faculty and administrators from similar underrepresented or marginalized backgrounds. Panels further encourage discussion around career paths and strategies to navigate academic and professional experiences that students and postdoctoral researchers may view as reinforcing negative stereotypes about their identities.

Doctoral Fellowship, Dissertation Fellowship and University Graduate Scholar Awards

Graduate programs may nominate a limited number of their graduate students for the Doctoral Fellowship, Dissertation Fellowship and the University Graduate Scholar Awards (master's and doctoral). In the 2022 nomination period, 147 students were nominated for these awards, 60 received offers (41%), and 57 accepted those offers (39%). The table below summarizes outcomes for some demographic groups the Graduate College tracks throughout the process:

Population	Nominations	Offers	Acceptances
All nominees	147	60	57
CANR	2	1	1
CAS	61	26	25
COE	40	14	12
CEHD	5	4	4
Graduate College	5	3	3
CHS	17	4	4
CEOE	9	6	6
Biden School	8	2	2
Historically Excluded Racial/Ethnic Populations (URM)	23	11	11
Females	86	40	38
STEM Degrees	100	43	40

ENHANCING GRADUATE EXPERIENCES ʙʏ FOSTERING INNOVATION ɪɴ GRADUATE EDUCATION

As a primary component of the Graduate College's vision is fostering innovation in graduate education, especially in creating and supporting interdisciplinary programs, delivering online courses and programs, and extending educational opportunities to nontraditional learners, the Graduate College made significant strides in these efforts over the past year. These efforts are discussed in detail below.

Creating and Supporting Interdisciplinary Programs

Traditional Graduate Programs

Enrollment in programs hosted in the Graduate College grew from 61 in fall of 2021 to 92 in fall of 2022. Adhering to our mission, the Graduate College supported the creation of three new interdisciplinary programs over the past year:

▶ **Interdisciplinary M.S. and Ph.D. in Quantum Science and Engineering (QSE)**
  – **Interdisciplinary Focus:** QSE focuses on understanding and leveraging the behavior of particles and excitations governed by the laws of quantum mechanics and could lead to the creation of quantum computers that can perform calculations that are not feasible with classical computers, quantum sensors that can measure tiny changes not accessible to classical sensors, and quantum encryption that is unbreakable. Because of these exciting opportunities, there has been significant recent investment by both industry and the federal government to create larger scale devices that leverage the principles of quantum mechanics. Our program is designed to train a "Quantum Workforce" with the skills needed to realize this technological revolution.
    – **Matriculated student count:** 6

▶ **Ph.D. in Education and Social Policy**
  – **Interdisciplinary Focus:** The interdisciplinary Ph.D. in Education and Social Policy program is a collaboration between the College of Education and Human Development and the Joseph R. Biden, Jr. School of Public Policy and Administration. The program prepares students to address complex education and social policy questions and grounds students in an understanding of how education, social and public policy systems work.
    – **Matriculated student count:** 5

▶ **Interdisciplinary Neuroscience Ph.D.**
  – **Interdisciplinary Focus:** Contemporary neuroscience is an interdisciplinary field that studies the nervous system to understand the biological bases of behavior, cognition, subjective experience, psychiatric or neurological disease, and the brain's computational processes, networks and functions. The idea of neuroscience as a dedicated and multidisciplinary branch of biology that synergistically combines physiology, anatomy, chemistry, physics, mathematical modeling, engineering, psychology and rehabilitation has resulted in a flourishing field.
    – **Matriculated student count:** 16

4+1 Programs

One of the most attractive entry points into graduate education is our 4+1 programs where students can complete their bachelor's and a master's degree through a coordinated curriculum that double counts a small number of graduate courses toward both degrees. In 2018, UD offered 60 distinct 4+1 programs. Currently, that number has more than doubled to 124 distinct 4+1 programs. Enrollments in these programs have followed suit.
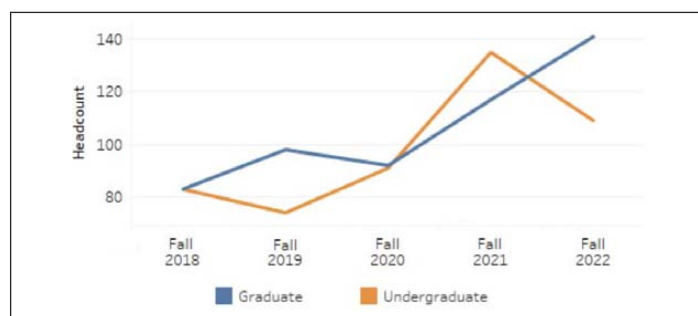

Figure H. Enrollment of students in 4+1 programs by degree status.

More innovative pipeline programs involve 4+1 or 3+2 programs where students from a non-UD undergraduate program articulate into a UD graduate program that their home institution lacks. Examples include a 3+2 articulation agreement with Millersville University where a physics student at Millersville can articulate into UD's material science and engineering graduate program. The number of programs like these at UD is small, but this is a promising way to build pipelines into our more specialized graduate programs, especially as we try to diversify our graduate programs by building meaningful connections to minority-serving institutions.

Certificates

Certificates fall into multiple categories including stand-alone certificates aimed at working professionals, "stackable" certificates, certificates that are integrated into degree programs, and certificates directed toward existing degree-seeking graduate students who want to add value to their program of study. As an example of the last type, the Graduate College added two value-added certificates this year, one in community engagement and one in sustainability. Since 2018, the number of students enrolled in certificate programs has more than doubled from 79 to 161. About half of this growth is attributable to the relatively new cybersecurity certificate. The other half is through the creation of new certificate programs that have low enrollments, in alignment with national trends.

While graduate certificates were once heralded as an ideally sized, revenue-generating credential for professionals, reality has shown this statement to be more nuanced. Nationally, enrollments in stand-alone certificate programs is miniscule. The data shows that professionals gravitate toward stackable certificates. Within this structure, certificates are designed in ways that can be combined together and counted toward a master's degree. While some programs have created stackable certificates in the last year, it is too early to report outcomes.

Market Research to Support Graduate Education

As mentioned above, to assist stakeholders in launching new graduate programs, the Graduate College market research program leverages graduate student expertise to analyze program demand, competition and other factors that can help determine a program's overall enrollment success. Over the past year, the Graduate College market

research team conducted research studies for the following programs:

- ▶ Environmental Economics Ph.D.
- ▶ Instructional Design Certificate
- ▶ Master's of Clinical Psychology
- ▶ Noncredit Business Intelligence Certificate
- ▶ Master's in English Education
- ▶ 4+1 in Literary Studies
- ▶ Noncredit Cybersecurity Certificate
- ▶ Nonprofit Leadership
- ▶ Master's in Early Childhood Development
- ▶ Master's in Plant and Soil Sciences
- ▶ Master's in Environmental Science and Policy
- ▶ Master's in Technical and Professional Writing
- ▶ Summer Camps for High School Students
- ▶ Certificate in Healthy Aging

The market research studies resulted in the creation of the following new programs:

- ▶ Noncredit Cybersecurity Certificate
- ▶ Noncredit Instructional Design Certificate

Additionally, a number of departments have used the market research reports in their Curriculog program proposals to the Faculty Senate. These proposed programs include:

- ▶ Ph.D. in Environmental Economics
- ▶ Master's in Environmental Science and Policy

Delivering Online Programs

Under the UD Online brand and operational function that is managed by the Graduate College/UD PCS, UD currently offers 28 fully online undergraduate and graduate degree programs and post- and pre-baccalaureate certificates. Twenty-five of these online programs are at the graduate level, and four are highly ranked by *U.S. News & World Report* in its 2022 U.S. News Best Online Programs. The Graduate College manages UD's relationship with two online program providers (OPMs) that provide marketing, enrollment management and student services for eight of our online master's degrees.

Over the past two years, UD developed its in-house instructional design capabilities in both UD PCS and Academic Technology Services and no longer requires instructional design services from one of the OPM partners. Additionally, over the past year the Graduate College and UD PCS have provided valuable market research, program development guidance and/or startup funding to allow several colleges and departments to create new online graduate programs, including:

▶ Online M.S. in Interdisciplinary Evaluation Science from the College of Education and Human Development

▶ Online Geospatial Imaging Certificate (post-baccalaureate) from the Department of Geography (currently in the Faculty Senate review process)

Another important accomplishment this year that aids in the creation of online degree programs is the new *UD Online Program Development Playbook* that UD PCS created in partnership with IT Academic Technology Services. The playbook outlines the steps that are required and the resources that are available for departments to create online programs.

Extending Educational Opportunities to Nontraditional Learners

Serving nontraditional graduate and undergraduate students, working professionals, and lifelong learners is another important role of the Graduate College since nontraditional students represent the largest student segment in the United States and because alternative credentials are gaining acceptance in the workforce. By helping UD better serve nontraditional students, the Graduate College and UD PCS better position the

University to weather the current steep demographic decline in the northeastern United States of traditionally aged college students (18–22-year-olds.)

Campuswide Advisement, Registration and Career Counseling Services

UD PCS serves as the nontraditional learners portal to UD classes, degrees and programs, and its Academic Advisement, Student Services, Registration and Career Counseling (ACCESS) Center provided advising and registration services to 2,130 nontraditional graduate and undergraduate students in the academic year 2021-22 (a 30% increase over the prior academic year). Nontraditional students served by the Graduate College include students who are:

▶ taking courses in Continuing Education Non-Degree or Graduate College Non-Degree status

▶ returning to complete degrees after a break in matriculation

▶ transferring from other schools

▶ undergraduate academically dismissed

▶ taking online courses, including matriculated students

▶ veterans and active military personnel

▶ Delaware residents interested in the Over-60 Program

▶ participating in high school dual enrollment

▶ working professionals in special programs with JPMorgan Chase, state of Delaware educators, Amazon associates in Amazon's Career Choice

▶ interested in noncredit programs

▶ in specialized cohorts of international students

Additionally, the ACCESS Center's work in the past year to grow UD's Early College Credit (ECC) Program creates a pipeline of undergraduate students to UD. The program offers free tuition in select undergraduate courses to juniors and seniors at participating public and private high schools in all three counties of Delaware. The most recent analysis of the ECC program indicates that 36% of participating seniors matriculated at UD.

Noncredit Programming

UD PCS' noncredit professional development programming served just under 2,000 nontraditional students in the past academic year through 25 certificate programs that teach

Building Partnerships to Meet Needs of External Organizations

The Graduate College and UD PCS partner with regional companies and organizations to ensure that University of Delaware graduate degrees meet workforce development needs. We use a number of programmatic means to achieve this end.
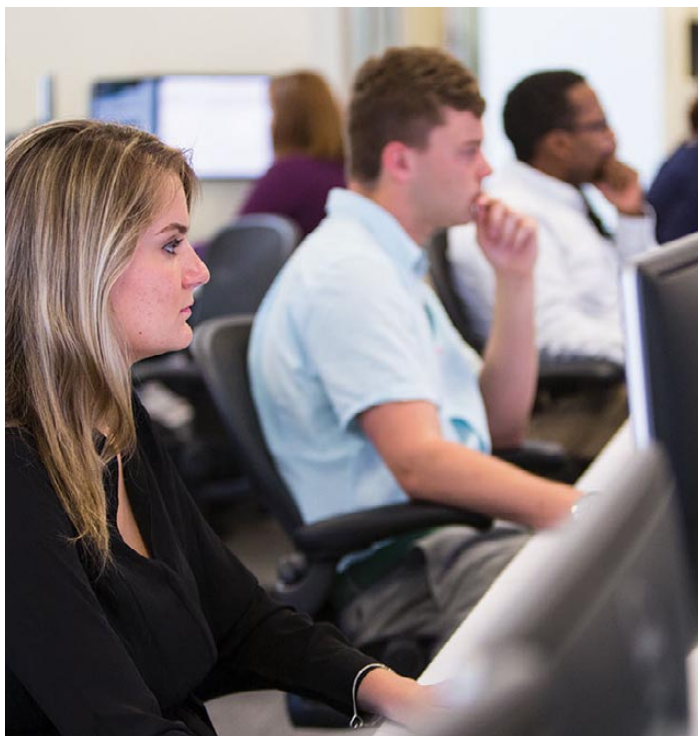
University to Business (U2B) Partnerships

A means to achieve the goal of building partnerships to meet the needs of external organizations is by creating mutually beneficial university-to-business (U2B) relationships via customized learning programs that develop the competencies of the given partner organizations' employees. For example, the Graduate College and UD PCS have helped the Lerner College of Business and Economics and the College of Engineering provide two post-baccalaureate certificate programs, one in Business Analytics and the second in Cybersecurity, to five cohorts totaling about 150 JPMorgan Chase employees. More than half of the employees who completed one of the post-baccalaureate certificates enrolled in the master of data science, master of business administration, master of business analytics and information management, or master of cybersecurity programs. In this example, UD met the employee development needs of its private sector partner while developing a pipeline of high-quality graduate student applicants. Additional metrics are listed below.

Two post-baccalaureate certificate programs were offered to JPMorgan Chase:

▶ With Lerner College — Provided Data Analytics Certificate to three cohorts of JPMC employees.
  - 84 employees completed as of writing of this report.
  - 52 (64%) matriculated in a master's degree yielding projected additional tuition income (beyond the contract value for the certificate delivery) of $686,874.

▶ With College of Engineering — Provided Cybersecurity Certificate to two cohorts of JPMC employees.
  - 27 employees completed cohort 1 and 30 are completing cohort 2 as of writing of this report.
  - 14 (52%) of cohort 1 matriculated in the M.S. in cybersecurity yielding projected additional tuition income of $262,500.

Similarly, over the past year UD PCS has provided customized learning solutions to regional organizations

high-demand workforce skills in business, IT, education, healthcare, law, food and hospitality, occupational safety, and sports and coaching. In addition, UD PCS offered test prep programs (SAT, ACT, GMAT, GRE, LSAT and Praxis), 30-plus self-paced online short courses, conferences that maintain medical credentials (Eastern Shore Medical Symposium, Summer Dental Symposium) and customized learning programs for regional companies and organizations.

Lifelong Learning via UD's Osher Lifelong Learning Institute

Housed within UD PCS, the Osher Lifelong Learning Institutes (OLLIs) at the University of Delaware helped 3,000-plus members aged 50 and over take classes, socialize with fellow lifelong learners and stay connected with each other via online learning. Over the past two years, UD OLLI Online has become the largest online OLLI in the country, serving members in Delaware and 25 other states. This remarkable accomplishment allowed seniors to stay connected during a severe period of social isolation during the COVID-19 pandemic.

including ChristianaCare, Incyte, Metro-North Railroad, and the state of Delaware. UD PCS partners with faculty from the Lerner College of Business and Economics and the College of Engineering to deliver some of these programs, thereby sharing valuable research-based knowledge with regional organizations so they can achieve their employee development and business objectives.

Another partnership program of note is UD's selection by Amazon to participate in its Career Choice program, whereby Amazon associates can start or continue their undergraduate education at UD. The associates can avail themselves of Amazon tuition assistance to pay for UD courses and degrees. Since Jan. 1, 2022, the ACCESS Center has received 87 inquiries from Amazon associates about UD degrees, and four Amazon associates have subsequently registered for undergraduate classes.

Graduate College Advisory Council

Over the past year, the Graduate College has worked with UD Development and Alumni Relations to lay the groundwork for the creation of a college advisory council comprised of UD graduates who now hold senior positions at regional organizations. This council will help the college better prepare graduate students to become future leaders in industry and provide useful employee development programs for our partners.

Creating On-ramps to Graduate Education for Diverse Populations of Prospective Students

As a research-intensive, technologically advanced university with global impact, UD and the Graduate College are committed to creating an educational community that is intellectually, culturally and socially diverse. As such, the Graduate College recognizes that we must create and promote additional on-ramps to graduate education for diverse student populations.

Affordability

To attract nontraditional students who are not ready to commit to a graduate degree program or do not know what topic they would like to pursue, we reduced the tuition for the graduate nondegree students (GCND) to the base rate of $979. Students can take up to three courses at this base rate before committing to a degree program.

Graduate Student Recruitment Events

The Graduate College coordinated and/or supported various virtual recruiting events in 2021-22, including:

▶ Department of Energy Recruitment Fair — 11 UD representatives from physics and astronomy, chemistry and biochemistry, biomedical engineering, materials science and engineering, electrical and computer engineering, geography and spatial sciences, CEOE Dean's Office, and Graduate College

▶ SACNAS (Society for Advancement of Chicanos and Native Americans in Science, Inc.) — four representations from chemistry and biochemistry, mathematical sciences, CEOE Dean's Office, and Graduate College

▶ ABRCMS (Annual Biomedical Research Conference for Minority Students) — two UD representatives from chemistry and biochemistry and the Graduate College

▶ Graduate School Fair at GEM Annual Meeting GRAD Lab (prospective graduate students from underrepresented minority backgrounds in STEM)

▶ Philadelphia Region GRAD Lab — Senior Assistant Dean LaRuth McAfee co-presented session on applying to graduate school and UD had "floor" at virtual graduate school fair, COE Dean (GEM alumnus) also participated in morning sessions and COE Dean's Office had representative in graduate school fair

In addition to participating in regional and national

recruiting efforts, the Graduate College has started to lead its own efforts aimed at introducing students from historically excluded racial/ethnic populations to summer and graduate opportunities at UD. In 2021-22, a pilot event for participants of the NSF-funded Louis Stokes Alliance for Minority Participation (LSAMP) program was held. As a member of the Greater Philadelphia Region LSAMP, this event was coordinated with the leadership of the Philadelphia AMP and UD's vice provost for equity. Five prospective graduate students attended this event, as well as one staff member from the Louis Stokes-Louisiana Alliance for Minority Participation (LS-LAMP).

Efforts are underway to strengthen UD's relationship with Delaware State University, and the Graduate College is playing a central role in this process. The Graduate College is additionally laying the groundwork for the development of relationships with other Minority-Serving Institutions in the mid-Atlantic region and to create targeted engagement opportunities with institutions near the 2022 SACNAS and ABRCMS conferences in San Juan, Puerto Rico, and Anaheim, California, respectively).

In addition to Graduate College-led initiatives, the Graduate College recognizes the importance of encouraging graduate programs to rethink their practices around recruitment and admissions to minimize practices that lead to the exclusion of certain populations. Over the past two and a half years, one way in which the Graduate College has done this is by leading workshops on holistic admissions practices. The first one was held in January 2020 and was open to graduate program leaders. Since then, program- or college-specific workshops have been held on request from unit leaders. To date, the following units have coordinated such workshops through the Graduate College:

▶ Psychological and Brain Sciences

▶ Geography and Spatial Sciences

▶ Political Science and International Relations

▶ Earth Sciences

▶ School of Marine Science and Policy

▶ College of Engineering

▶ Art Conservation

While not all programs keep the Graduate College updated on changes they have made based on these workshops, feedback has been overwhelmingly positive.

Some attendees have reached out to the Graduate College with additional questions or concerns that have arisen in conversations with other faculty, or to get feedback on initial drafts of process revisions. Programs that have implemented such practices have shared how they have found the students they've admitted to be more diverse than in the past, and students who have enrolled have been successful. Therefore, they are optimistic that the changes are moving their programs in positive directions and that it will be possible to convince faculty not yet supportive of the changes to be open to piloting some of the practices.

In summer 2022, the Graduate College additionally launched a new funding opportunity called Breaking Barriers. This award will provide two years of recruitment support for the selected proposal and, if the project successfully recruits at least two students from the identified population of interest, one year of fellowship for each student. As part of the application, the unit must describe changes to their recruitment and retention practices to address the needs of the selected population and biased practices by the unit that are likely negatively impacting applicants from that population. Seven applications were submitted in this inaugural year and up to two will be selected for the award. By incentivizing new practices in this way and offering a new award opportunity each year, it is expected that more programs will adopt promising practices around recruitment and admissions that will bring about new practices for other programs to learn from.

Graduate Scholar Awards

Graduate programs may nominate a limited number of their prospective graduate students for the Unidel Distinguished Graduate Scholar Award (doctoral only) and the University Graduate Scholar Awards (master's and doctoral). In the 2022 nomination period, 102 prospective students were nominated for these awards; 46 received offers (45%) and 19 accepted those offers (19%). The table below summarizes outcomes for some demographic groups the Graduate College tracks throughout the process:

Summer Pipeline Programs

There is no better way to demonstrate excellence in graduate education to prospective students than to have them spend a summer on campus working with our faculty. Some individual faculty stand up their own summer research programs, and the Graduate College is happy to advertise these opportunities on our website.

For faculty and program directors who cannot stand up their own programs, the Graduate College offers Summer Opportunities for Undergraduate Research and Creative Endeavors (SOURCE) where we provide programming and support for undergraduate researchers to work with UD faculty over the summer. SOURCE focuses on attracting students from underrepresented groups (e.g., first generation, historically underrepresented, disabled, low-income, etc). Last summer, we hosted over a dozen students, and the yield rate for these scholars matriculating at UD is roughly 10%.

Competitive Counteroffer Program

Enabling graduate programs to better compete for top students, the Graduate College Competitive Counteroffer program allows graduate programs to request one-time awards up to $5,000 for their top prospective students who have attractive offers from other institutions. Over the past year, 20 competitive counteroffers were made leading to 11 matriculated graduate students.

Population	Nominations	Offers	Acceptances
All nominees	102	46	19
CANR	4	1	0
CAS	35	18	5
COE	22	11	2
CEHD	7	2	1
Graduate College	8	4	3
CHS	11	5	4
CEOE	11	3	2
Biden School	4	2	2
Historically Excluded Racial/Ethnic Populations (URM)	38	23	9
Females	60	29	12
STEM Degrees	61	25	10

PROVIDING ADDITIONAL OPPORTUNITIES FOR CAREER-FOCUSED PROFESSIONAL DEVELOPMENT

Transformative graduate education is more than research scholarship. As we want to prepare our graduates for success in a variety of careers, we envision a future for our graduates where they have strong career foundations, confidence in themselves and their abilities, and the resilience needed to thrive during their time on campus and beyond. As such, we will continue to work to provide students with career-focused professional development programming and other opportunities.

Creating Data- and Outcome-driven Resources that Help Graduate Students and Postdocs Thrive

To assist with graduate students' professional development, we are committed to building data- and outcome-driven, integrated and holistic graduate professional development resources that empower them to translate their education into meaningful careers. To this end, we have launched several professional development programs that are described below.

Alumni Mentoring through Leveraging Engaged Alumni Program (Grad LEAP)

Grad LEAP is an alumni mentor program designed to link Blue Hen graduate alumni with current graduate students. The mentoring program is designed to provide holistic support, guidance and advice regarding the challenges of doctoral education and research, professional development strategies, and personal growth. In its first year, Grad LEAP matched over 200 pairs of mentors and mentees. The mentoring pairs logged over 1,100 conversations with topics ranging from academics to connecting coursework to careers. As a testament to its success, the pioneering and innovative Grad LEAP program was featured in the *Why Mentorship Matters: Scaling Student Success Efforts for Graduate Institutions* panel in March 2022.

Accelerate to Industry (A2i)

The Graduate College's Accelerate to Industry (A2i) initiative provides career development programming to graduate students from multiple disciplines so they are prepared to transition into careers in a variety of sectors. The skills and competencies we provide are informed by conversations with regional industry partners, such as W.L. Gore, AstraZeneca and Siemens Healthineers. The college leverages existing A2i resources and expertise from North Carolina State University, the A2i program founding institution, and A2i academic partners across the country. For academic year 2021-2022, 80-plus graduate students participated in the A2i program.

Peer Mentoring

Over the past year, the Graduate College also boosted its support to department-specific peer mentoring programs. The **College of Engineering** supports a collegewide peer mentoring program called COE EmPower based on an MIT model. Other graduate programs with peer mentoring programs include **applied mathematics/mathematics, geography, history, linguistics and cognitive science, and plant and soil science.** Programs like these strengthen our graduate community, improve safety and wellness, and improve retention, so the Graduate College would like to see intentional, systematic peer-peer mentoring activities in as many programs as possible. Two part-time peer mentoring leads were hired to develop a comprehensive guide for peer mentors and to organize mentor training programs and community-building events. The resources developed will be available for any academic departments or student groups.

Applied Career Exploration (ACE) Program

The Applied Career Exploration (ACE) Program is an experiential learning fellowship designed to broaden students' knowledge of career options and prepare them for success in desired career paths. In our first year, we offered four fellowships with approximately $20,000 in stipends and projects ranging from diversity, equity and inclusion to sustainability.

Leadership Certificate for Graduate Students

The Graduate College professional development team worked closely with the UD PCS customized learning team to pilot the first leadership certificate program for 18 graduate students. This cohort-based certificate program is taught by Lerner's Jack Baroudi and features both in-person and asynchronous online components. The Graduate College also sponsored 10 women graduate students to participate in the Women's Leadership Initiative's ASCEND program this academic year.

External Grants

In addition to programs funded by the University, the Graduate College professional development team won external grants this academic year. Delaware INBRE (IDeA Network of Biomedical Research Excellence) provided $2,500 to sponsor *Managing Conflict Productively: Recognizing Bias and Dealing with Difficult Personalities.* Over 30 graduate students attended the virtual event, and 100% of program evaluation survey respondents reported being satisfied with the program.

Moreover, the Graduate College also won $15,000 in funding from the Burroughs Wellcome Fund for the 2022–2023 academic year. A representative from the professional development team will also receive training in program evaluation from the Burroughs Wellcome Fund to advance scholarship in the field of graduate student career development.

Inspiring, Educating and Empowering Graduate Students and Postdocs in their Career Journeys

Graduate students and postdocs want to be inspired and empowered in their career journeys, and the Graduate College has taken steps to address these needs.

Spark! Symposium

This year the Graduate College also launched the Spark! Symposium, an interactive series of TED-style talks to celebrate the discoveries made by graduate students and postdocs and to enable the community to learn about the ongoing research at UD. Five presenters from the College of Agriculture and Natural Resources, College of Arts and Sciences, College of Earth, Ocean and Environment, College of Engineering, and College of Health Sciences were selected via a competitive process to showcase their research at the first Spark! Symposium, *Beyond the Tipping Point: Challenges at the Interface of the Environment and Humanity* in April 2022.

Postdoctoral Leadership Fellows

The postdoctoral leadership fellows program facilitates the sharing of knowledge, resources and support among all UD postdocs. Two inaugural fellows were hired, and they led a variety of community-building efforts over the past year, including hosting the week-long National Postdoc Appreciation Week program, creating and maintaining the postdoc Slack channel and email list, and holding a variety of social events throughout the year.

RECRUITING AND RETAINING THE BEST AND BRIGHTEST STUDENTS

Adhering to our commitment to recruit the best and brightest students as we increase overall graduate enrollment, the Graduate College has taken steps to implement admissions practices that minimize bias, establish more informed recruitment goals and better engage prospective students through universitywide marketing efforts.

Implementing Admissions Practices that Minimize Bias

The Graduate College strongly encourages graduate programs to adopt holistic approaches to admitting new students for two reasons. First, examination of these practices will increase access to programs by eliminating bias and spurious indicators that are not related to students being successful. Second, the process of determining effective predictors of student success will lead to higher retention and success rates among the students. When adopting holistic approaches, it is not necessary to reinvent the wheel. The Council of Graduate Schools has studied promising practices in holistic admissions in some detail. Its report and recommendations are well-sourced and **free to download.** The Graduate College is here to help by running workshops for groups

interested in adopting holistic practices. To date, the College of Engineering and College of Earth, Ocean and Environment have taken advantage of these workshops as have individual programs in psychology and brain sciences, political science and international relations, and art conservation.

Engaging Prospective Students through a Robust Universitywide Marketing Strategy

Focusing on increasing graduate student enrollment universitywide, the Graduate College marketing and communications team continues to promote the Graduate College to prospective students via internally and externally managed efforts. While the Graduate College marketing and communications team is primarily tasked with promoting graduate education in general, along with the six interdisciplinary graduate degree programs and two interdisciplinary graduate certificate programs housed within the Graduate College, the team also provides as-needed, program-specific consultative support and counsel to the marketing and communications teams housed within UD's other colleges and schools.

Internally Driven Marketing Efforts

Advertising

Since early 2020, the Graduate College marketing and communications team has managed targeted social media advertisements promoting the Graduate College. Incorporating compelling text and imagery, the ads contribute to inquiries and applications from prospective students and to overall brand awareness. What's more, over the past year, the social media ad targeting criteria and imagery have been modified to focus on more diverse audiences, specifically audiences who have expressed interest in or affiliations with HBCUs. Samples of ads are provided below.

Social Media

The Graduate College also reaches prospective students, as well as current students, with strategic posts on our Graduate College-specific social media accounts on Facebook and Twitter. Used to share news, upcoming events, student accomplishments, information about specific programs, and more, Graduate College social media posts reached an audience of 596,526 in 2021-2022.
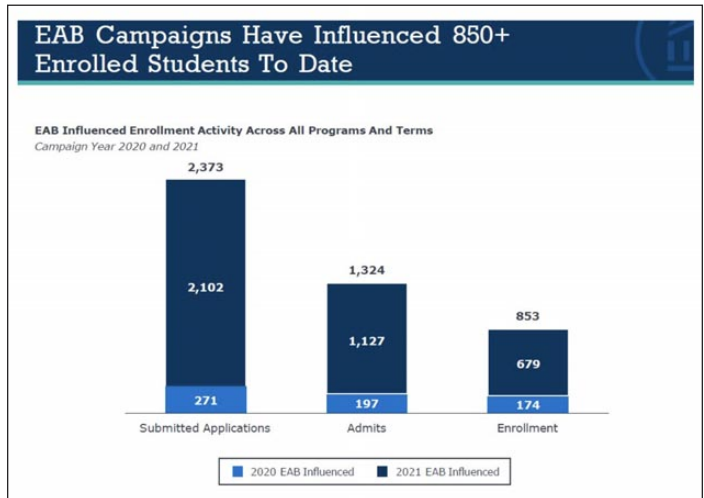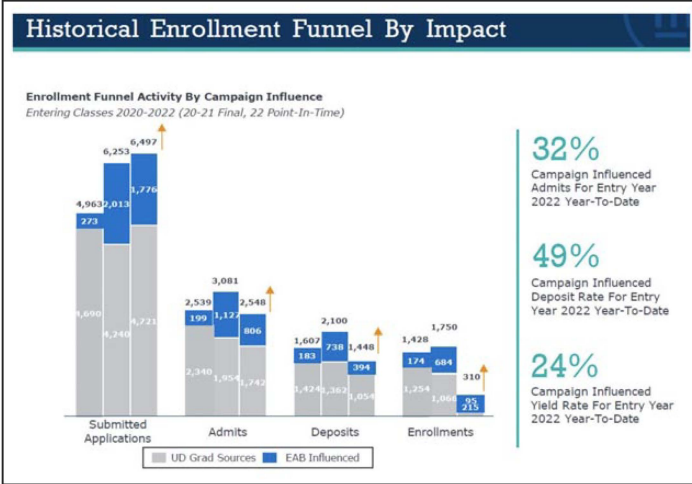
Externally Driven Marketing Efforts

Over the past academic year, the Graduate College extended our reach to prospective students by leveraging our existing contract with EAB to create an additional campaign focused on promoting 40-plus graduate programs related to sustainability and the environment (as a complement to our existing campaign focused on

promoting 20 data-science-related programs). The integrated marketing campaigns include social media ads (Facebook, Instagram, LinkedIn), emails (various versions at the student awareness, consideration and decision stages), USPS mail, online decision indication surveys, content downloads, information request forms, and landing pages that are designed to cater to specific student journeys and move prospective students through the decision funnel toward enrolling at UD.

To share data and track the effectiveness of EAB campaigns, we have established a bidirectional data feed between the Graduate College and EAB that allows the Graduate College admissions team to track campaigns, inquiries, applications, and enrollments and enables EAB to build prospective audience targeting criteria based on attributes, response rates and actions of students within our systems.

These efforts, combined with other promotional and recruitment efforts, led to 6,253 applications, 3,081 acceptances/admits, 2,100 deposits and 1,750 matriculations. Of the 1,750 enrollments, EAB influenced 684.

Historical Enrollment Funnel By Impact

Enrollment Funnel Activity By Campaign Influence
Entering Classes 2020-2022 (20-21 Final, 22 Point-In-Time)

Legend: UD Grad Sources | EAB Influenced

32%
Campaign Influenced Admits For Entry Year 2022 Year-To-Date

49%
Campaign Influenced Deposit Rate For Entry Year 2022 Year-To-Date

24%
Campaign Influenced Yield Rate For Entry Year 2022 Year-To-Date

Submitted Applications Volume Increase YoY

Historic Enrollment Funnel
Entry Years 2020-2022 All Terms (2022 Point-In-Time)

	Submitted Applications		Admits		Deposits		Enrollments
2020	4,963	51.2%	2,539	63.3%	1,607	88.9%	1,428
2021	6,253	49.3%	3,081	68.2%	2,100	83.3%	1,750
2022	6,497	39.2%	2,548	56.8%	1,448	21.4%	310 Still Progressing

Partnership Executive Summary

Executive Summary
- Roll-out of multi-channel campaigns driving significant leads and online traffic
- Key cohorts are experiencing increases in applications
- Investment in EAB campaigns continue to drive ~27% of deposits

Top of Funnel	Student Journey	Enrollment Impact
Driving Awareness	**Building For The Future**	**Targeting Key Cohorts**
2.9M Digital Ad Impressions	**1,597** Engagements Across All Channels	**27%** EAB Influenced Applicants For 2022
Digital Engagement	**Deadlines Drives Applicants**	**Enrollment Impact**
25.3 K Clicks From Digital Campaigns	**41%** Of Campaign Engagement Stems From Deadline Emails	**49%** Deposit Rate Impacted By 2022 EAB Campaigns

Return On Investment Analysis

Campaign Year 2021 – All programs

Multi-Year ROI
With EAB Investment & Fixed-Costs

Campaign Year 20/21	
Program Fees	$262,562
Digital Media	$79,468
List Buy	$23,385
Postage	$14,888
Total Investment	**$380,303**
Estimated Incremental Enrollment Influenced by EAB*	~348
Total Estimated Lifetime Revenue	$5,443,351
ROI	**1,331%**
Revenue To Cost Ratio	**14:1**
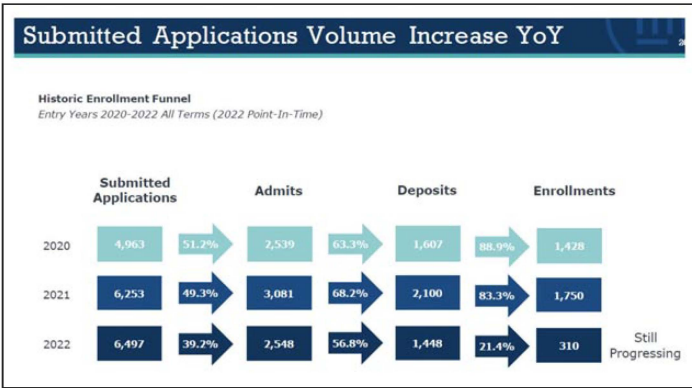
Return On Investment Analysis

Campaign Year 2021 – Professional Programs Only

FY2021 ROI
With EAB Investment & Fixed-Costs

Campaign Year 2021	
Program Fees	$262,562
Digital Media	$42,858
List Buy	$11,865
Postage	$7,554
Total Investment	**$324,839**
Estimated Incremental Enrollment Influenced by EAB*	~94
Total Estimated Lifetime Revenue	$1,706,225
ROI	**425%**
Revenue To Cost Ratio	**5:1**

Increased Funding for Graduate Students on Contract

Expanding funding for prospective and matriculated graduate students is one of the objectives of the UD and Graduate College strategic plans for many reasons. While we never seek to buy graduate students, our funding packages should be comparable to our those of our peers so that our graduate programs can compete on quality. For insight, we can look at our top decliners. These institutions are the institutions that students choose to attend when they decline our offers. Top decliner data for 2022 will not be available until the data in the National Student Clearinghouse is updated by other institutions in late October.

Institution	Applications	Minimum stipend (9 month)
University of Delaware		**$21,000**
Pennsylvania State University	33	$20,752
University of Maryland College Park	18	$21,210
Rutgers - New Brunswick	16	$30,162
George Washington University	14	Not published
North Carolina State University	14	$15,700
Georgia Institution of Technology	13	$19,530*
The Ohio State University	13	$21,280

*Table C. Top institutional destinations for prospective graduate students who declined UD's offer. (*only 2022 data available)*

The Graduate College, in collaboration with the other colleges, is taking a multifaceted approach, which is needed for any complex problem. When doing so, we follow two principles. First, we recognize that we must compete on quality, not on buying graduate students. Therefore, as stated above, our goal is to offer a top quality graduate education, and that is what our unique competitive advantage should be against our peers. Second, internal funds directed toward graduate education, stipends and graduate tuition scholarships should favor our research mission, doctoral programs and master's degrees that are nationally recognized as terminal (e.g. performance or fine arts). The Graduate College has taken the following steps to be more competitive.

For those cases where the quality is comparable but our stipend is falling short, we have retasked some funds toward the **Competitive Counteroffer program**.

We are actively engaging all stakeholders on campus to commit to providing 12 months of support to prospective students. We know from the Competitive Counteroffer award and the internal and external review that led to the creation of the Graduate College that UD lags behind its peers in offering 12 months of support to graduate students. For departments that fund graduate students primarily through sponsored projects, year-round support is natural. For departments that fund students on nine-month teaching or graduate assistant positions, summer support can be from teaching, external opportunities for research and scholarship, or internal fellowship support. From the perspective of a prospective student, there is a difference between an offer letter that includes a commitment to multiple years of support that includes summer funding and an offer letter that includes only a commitment to nine months of support. The Graduate College encourages program directors and chairs to find ways to make 12-month, multi year commitments where possible. Along these lines, the Graduate College has taken the following actions:

▶ We expanded our Summer Stipend program to provide bridge funding to graduate students in departments that commit to promising practices for effective mentoring during the summer months.

▶ We partner with other units to expand summer opportunities by matching fellowship and training grants. In addition to providing matching support for large training grants like NSF NRTs and NIH T-32s, we matched a Laffey-McHugh Foundation grant to expand the Graduate Community Engagement Summer Scholars Program to double the number of participating students from four to eight.

As discussed earlier in this report, many of our peers offer 12 months of support to prospective doctoral students, and to be competitive, we should be doing the same to as great an extent as possible. Figure I shows the distribution of contract support duration our graduate students have received. The data for AY22-23 looks the way it does because this is the current status. Many two-term students will end up receiving summer contracts, so the final result will look similar to previous years. This highlights one of the challenges we face in recruiting the best and brightest students, uncertainty. When prospective students receive a commitment to support that includes the summer term, it is a far more competitive offer than one that includes only 9 months of support. Furthermore, summer support keeps students working in their field, shortens the time to degree

and is likely advancing UD's research or teaching mission. It is important to note that a commitment to summer support need not be fellowship support. It could include teaching during the special sessions or performing other needed tasks as a graduate assistant.
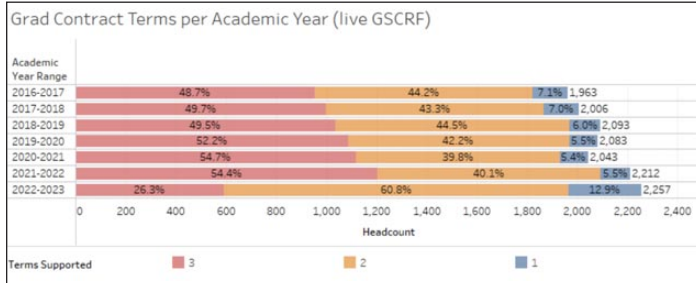

Figure I. Historical distribution of graduate contract support duration by unique headcount. A 2-entry may be associated with a student having one contract spanning two terms or two single-term contracts. Similarly, a student counted as having three terms of support may have support through a single 12 month contract or multiple contracts that sum to 12 months in duration. A 3-term contract is 12-months of support.

Graduate Degree Production and Student Success

The Graduate College measures its success by the success of its graduate students. At this time, the best metric available is degree productivity (Figure J) along with student success rates, time to degree and job placements. Graduate degree productivity was strongly impacted by the pandemic and economic downturn during 2020-2021 which was followed by a rebound in 2021-2022 where record numbers of doctoral and master's students completed their degrees and entered the workforce. The Graduate College has built out its capacity to gather and share more detailed data on many of these outcome measurements, and we expect to be able to share more with program directors, chairs and deans in the coming year.

Figure J. Graduate degree productivity by degree type over time. (Academic Years are Fall through Summer.)

FULFILLING OUR VISION THROUGH PROFESSIONAL EDUCATION, CONTINUING STUDIES AND LIFELONG LEARNING

The Division of Professional and Continuing Studies is an important part of the Graduate College. Its mission is to serve as the nontraditional students' portal to UD degrees and programs. UD PCS is made up of four programmatic areas that provide learning opportunities to students across their lifetime from high school through retirement:

1. Continuing Education to start or finish a UD degree or program

2. UD Online to earn a credential while working or remotely

3. Noncredit professional development programs to upskill and reskill for career advancement

4. Osher Lifelong Learning Institutes in Wilmington and in Kent and Sussex counties for adults age 50-plus.

As described above, UD PCS programs complement Graduate College programs that serve full-time, traditionally aged graduate students. UD PCS programs support undergraduate and high school students, but many of these students eventually may pursue graduate education, and when they do, Graduate College programming will be there for them. In addition, UD PCS is actively working to create on-ramps from its credit and noncredit programming into appropriate UD graduate degrees. For example, noncredit students could receive undergraduate or graduate credit for their UD PCS certificate program. One way to achieve this is through a UD Credit for Prior Learning policy, which UD PCS is helping draft in the coming academic year.

As a result of having UD PCS in its organizational structure, the Graduate College is superbly positioned to provide lifelong learning to UD graduate students, whether they take a high school dual enrollment course before eventually pursuing a graduate degree or if they return to UD as a member of one of our nation-leading OLLI institutes. The Graduate College will be there for them.

Acknowledgements

The Graduate College and graduate education at UD had an excellent year. Much of that success happened through the intense and often unseen efforts of the many Graduate College team members, including Michael Alexo, Lea Asti, Cindy Dolan, Tiffany Harrison, George Irvine, Adam Kamras, Steve Kendus[1], Cindy King, Mary Martin, LaRuth McAfee, Tim Nelson, Cindy Rechsteiner, Suprawee Tepsuporn and many others on the Graduate College/Professional Continuing Studies teams as well as Emily Davis, Laura Desimone, Paul Laux, Ryan Zurkowski and all those who answered the call to serve on the GCC.

[1] *Steve Kendus left us for a great opportunity outside of UD. His contributions to graduate education at UD are evident throughout this report.*

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