

**The Office of Graduate and Professional Education
Program Review
Fall 2011**

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Executive Summary

The University of Delaware (UD) is a comprehensive land grant, sea grant and space grant institution classified under the Carnegie system as having very high research activity (RU/VH). UD is state-assisted, privately chartered University enrolling ~17,000 undergraduates and ~3650 graduate and professional education students. Through its seven colleges, UD offers 49 doctoral, 102 master's and 14 dual degrees, 17 graduate certificates and 2 outreach programs. In 2011, 260 doctoral and over 900 master's degrees were conferred.

The University's aspirations in graduate and professional education are centerpieces in its Strategic Plan, the Path to Prominence™, as outlined in two of the Plan's six milestones: *A Premier Research and Graduate University* and *Excellence in Professional Education*. The University is committed to "achieving levels of excellence, intensity and breadth of research and of graduate and post-doctoral education never before seen at the University." Specific objectives include increasing the profile and growth of graduate education and providing full support for graduate students. In this context, the synergy between scholarly research and graduate education is clear: building an excellent and productive faculty is central to achieving these graduate education objectives. Sponsored research activity continues to grow, and was \$196 million in FY2011, a 100% increase over the past decade. UD faculty competed effectively in ARRA funding, receiving more than \$65 million. UD is now among the top 100 institutions for federal obligations in science and engineering. Interdisciplinary research initiatives in energy science and policy, the environment, human health and interdisciplinary humanities are among areas targeted for growth and new program development.

In building professional programs, the University seeks "to extend the reach and impact of our professional programs and to reap the benefits for our students and faculty of closer engagement with our society, its needs, and its problem-solvers." The University offers advanced professional degrees in traditional areas including business, health, and education that are integral to its position as the state's leading institution of higher education. UD does not have medical, law nor dental schools. The development of professional science master's programs is envisioned with new PSMs in biotechnology and bioinformatics recently launched. Other initiatives concern leveraging our expertise to strengthen business and corporate governance and to expand partnerships in biomedical research through the Delaware Health Sciences Alliance.

A recent, successfully completed Middle States of Higher Education Accreditation took a thoughtful and thorough look at these two Strategic Plan milestones making recommendations that serve to guide our work. The report suggests that interdisciplinary research resources must be institutionalized and available in ways that incentivize these efforts. Highlighted among other structural changes is the need to align promotion and tenure policies and faculty incentives with UD's interdisciplinary research and education goals.

Concerning professional education, the Middle States review underscored the benefit in developing “internal metrics and external benchmarks of quality in professional programs,” including national accreditation of programs, where possible, to ensure quality. Additionally, to clarify the objectives in expanding professional education, the UD administration needs “to articulate dimensions of quality and value, along with revenue generation” that are important to the institution.

In an overarching recommendation, the Middle States accreditation addressed the University’s continued challenges in enhancing diversity, noting that UD’s populations are less diverse than those at any of its peer institutions. Specifically, the need to increase the representation of women faculty in science and engineering and the racial diversity in all fields is clear. The report strongly asserted that the “institution should commit itself forcefully and visibly to improving its diversity. The leaders of the University—Deans and Chairs, as well as the President and Vice Presidents—have a particularly important role to play.”

The Office of Graduate and Professional Education is the University-wide administrative unit charged with providing leadership for, and oversight of graduate and professional education. The Office’s Strategic Plan¹ highlights the following areas as essential to meeting the University’s aspirations for excellence as articulated in the Path to ProminenceTM.

Advance and Sustain Highest Quality Programs

- *Increase graduate student support to strengthen prominence, improve our ability to compete with other leading universities for the best and brightest students, and shorten time-to-completion rates.*
- *Build management and budget structures that encourage and promote cross-program/college collaboration and increased opportunities for interdisciplinary programs and high-profile research.*
- *Foster and sustain robust and dynamic graduate programs that create knowledge and value for society and respond to needs and opportunities from the local to the global scale.*
- *Encourage and support opportunities for professional and social exchange among graduate and professional students, faculty, staff, and others.*

Strengthen Diversity

- *Expand participation of underrepresented groups in all graduate programs through the development of more effective, innovative, and better coordinated recruitment and retention strategies and new and expanding incentive and scholarship programs.*

Support Globalization and Enrichment of the Graduate Experience

- *Develop rich resources to support fieldwork, internships, and international and other opportunities for extramural engagement that will enrich the graduate experience.*

¹ <http://www.udel.edu/gradoffice/about/#strategic>

Improve Advocacy

- *Better showcase and promote the significant accomplishments and recognition of our students and programs.*
- *Raise awareness about graduate student success nationally.*
- *Utilize increased public relations to build development opportunities.*
- *Promote value of public and citizen scholarship and graduate student engagement with local communities, the state of Delaware, our nation, and the world.*

Expand Professional Education

- *Strengthen and expand professional master's degree and certificate programs to address opportunities and needs in a range of fields, including mathematics, science, engineering, social sciences, educational leadership, business, and the humanities.*
- *Extend the reach and impact of our professional programs beyond the region and develop high-profile professional programs that build upon the University's strength and offer opportunities for global distinction.*

This self study document prepared by the Office of Graduate and Professional Education provides an overview of the organization, structure and scale of graduate and professional education at the University of Delaware. It addresses the scope of graduate offerings, the function of the Office and the activities it currently leads to advance graduate education. Future plans that align with the vision of the University are described along with likely challenges that will need to be addressed.

I. Administrative Structure, Responsibility and Authority

The University of Delaware is organized into seven colleges- Agriculture & Natural Resources (CANR), Arts & Sciences (CAS), Business & Economics (CBE), Education & Human Development (CEHD), Engineering (CoE), Earth, Ocean and the Environment (CEOE) and Health Sciences (CHS). Graduate and professional programs are housed in each of the colleges. There is no Graduate College and thus, no graduate Dean. The lead academic officer for graduate education is the Vice Provost, who oversees the Office of Graduate and Professional Education (OGPE). As a University-wide academic administrative unit, the Office of Graduate and Professional Education reports to the Provost. Its myriad roles focus on providing campus-wide leadership for graduate and professional education. In collaborative partnership with faculty, students and administration, OGPE seeks to support, sustain and expand high quality programs, including interdisciplinary programs, enhance the diversity of the graduate student body, ensure student success and provide visibility. Part of OGPE leadership includes stimulating new programs and policies. The faculty are the engines of academic programs; OGPE provides successful administration of these objectives by ensuring implementation and compliance. The Office is a resource to faculty, programs and University offices for best practices in graduate education. The Office provides support for graduate students, including their academic and professional growth through University-wide initiatives including funding opportunities, professional development, academic counseling, student life and ombudsman activities. The Office and its staff also provide advocacy and visibility for graduate education and the students it serves in tangible ways both on and off campus. In particular, the OGPE serves to heighten attention to graduate education issues among various academic and administrative units on campus and to collaboratively serve as a best practices resource for these other units.

Programs and departments are the degree-granting units at the University. Graduate degree programs are governed by program policy statements developed by the unit faculty in consultation with the Vice Provost and/or Assistant Provost. The program policy statements outline the degree programs' criteria for admission, student evaluation throughout the program including standards for degree conferral, goals, curriculum, and assessment of student learning outcomes. Program policy statements are approved by the Graduate Studies Committee of the Faculty Senate, which works closely and collaboratively with the Vice Provost and Assistant Provost to ensure consistency and high academic standards. The Graduate Studies Committee is comprised of faculty representatives from each of the seven colleges and two graduate students appointed by the Graduate Student Senate. The establishment of new programs and the sun setting of existing programs require Faculty Senate approval. Via the University Faculty Senate, the faculty accepts both the responsibility and the burdens of academic governance. The Committee's challenge is to ensure that the decentralized approach to graduate education is directly related to the capability of the University to provide a quality program for each student admitted. A complete listing of the graduate programs is found in Appendix 1.

The Faculty Senate, via the Graduate Studies Committee, and in collaboration with OGPE, establishes and periodically reviews minimum graduate admissions criteria including language proficiency of international students. Individual programs may, and

often do, set more stringent admissions requirements as articulated in their program policy statements.

Periodic review of existing graduate programs generally takes place via the University's established academic program review (APR) process and/or in alignment with disciplinary accrediting body procedures. The University's APR process examines departments holistically, i.e. graduate and undergraduate programs are examined together. This process is led by the program's college Dean and involves both a department faculty-driven self study and an external peer evaluation. Findings and recommendations are reviewed by the Dean and Provost and reported to the Faculty Senate. The OGPE is often involved in the self study to the extent OGPE provides graduate-level data requested by the program.

Moving forward, OGPE should be more actively involved in the APR of graduate programs given its central leadership position and thus, its ability to place the reviews in appropriate University and disciplinary contexts. It is recommended that the Vice Provost and/or his designee be involved in each APR that includes assessment of a graduate program. Involvement would include meeting with the external reviewers during their campus visit, and meeting with the unit Chair, Dean, Provost and Deputy Provost to discuss the committee report recommendations and proposed implementation steps and timeline. Through this approach, OGPE will be positioned to provide effective leadership and support ensuring alignment with the University's strategic goals and to provide counsel to the Provost and Deans in support of program improvement. While an alternative evaluative approach adopted by some other institutions is to review graduate programs separately, the above proposal is arguably more organic, aligning with the existing structure and culture surrounding APRs. It is clear that for program quality assessment and enhancement, OGPE needs to be an integral component of periodic graduate program review.

The Office of Graduate and Professional Education serves as the central repository of graduate admissions and matriculated student data. The OGPE is charged with the responsibility to verify that students in each program meet the standards and requirements of the degree. This is accomplished by continual and regular review and notification of student academic standing, probationary conditions, registration requirements, and academic deadlines of students. Procedures for programs to verify and inform the OGPE when a student has met candidacy requirements, recommendation for transfer credit, completion of non-registered examinations and milestones, request for leave of absence, and request for substitutions are in place and monitored and verified centrally by the Office. The Office notifies students of academic dismissal and serves as the appellate office for those dismissals that are appealed. The Office is responsible for the information that is reflected on the student's academic transcript. Additionally, OGPE reports graduate student data to departments, colleges, the Provost, and other campus-wide offices. It also responds to data requests from external bodies, e.g. CGS, Peterson's, NRC, either independently, or in collaboration with the Office of Institutional Research.

The organizational context of graduate education at the University of Delaware is a hybrid of centralized and decentralized infrastructure. This collaborative approach permits consistency in applying standards and uniformity in the treatment of students across more than one hundred degree programs. The lack of consistency and uniformity in applying the standards increase the likelihood of grievances and legal challenges to administrative decisions, which can be costly to the University. The centralized authority of OGPE for academic standards for the degree and the academic review of graduate students and the policies for fairness in funding strongly supports the centralized approach to the OGPE. Another area of centralized structure is the current process that relates to the judicial affairs and student conduct issues. OGPE adjudicates academic student conduct issues. Non-academic student conduct issues are adjudicated in collaboration with the Office for Student Conduct. Determining the proper intersection of when a student's conduct is purely non-academic rather than connected to academic performance is not always clear. Not using the resources of OGPE to adjudicate student issues that are purely non-academic seems prudent but this is a current infrastructure question that is in review and in discussion.

Graduate Council

The Graduate Council is a body of faculty and graduate student leaders from within the University that have demonstrated a commitment to graduate and professional education through their efforts to enhance the quality and impact of the graduate student experience. Each of the seven colleges has faculty representation on the Council. The President and Past President of the Graduate Student Senate are members of the Council. The Council is a communication conduit between graduate programs and the Office of Graduate and Professional Education and serves to advise the Vice Provost on all matters concerning graduate and professional education.

The Council works in cooperation with the Faculty Senate Committee on Graduate Studies on matters within the latter's purview including, but not limited to, graduate admissions standards, program development and review. The Council consists of four sub-committees: Policies & Procedures, Diversity, Professional Education and Student Development/Life/Funding.

Professional and Continuing Studies

Consistent with the goal of the University of Delaware Strategic Plan, Path to Prominence™, to enhance professional education the Division of Professional and Continuing Studies (PCS) became an organizational unit within the Office of Professional and Graduate Education (OGPE) on July 1, 2009. PCS is described in more detail in section XIII of this report. PCS has several roles in support of OGPE activities that are detailed in various sections of this report as appropriate.

II. Graduate Programs Overview

Current Status

Graduate enrollment in fall 2011 is 3,656 students. Of these students, 2,750 are enrolled full-time while 906 are part-time. The diversity of graduate students remains

steady, with U.S. racial/ethnic² minority students representing 18% of registered graduate students in the following proportions: 0.2% American Indian or Alaska Native, 6.2% Asian, 7.0% Black or African American, 3.6% Hispanic or Latino, 0.1% Native Hawaiian or Other Pacific Islander, and 0.9% multi-ethnic. International students represent 29.8% of registered graduate students. 49.0% of enrolled students are in doctoral programs, 46.0% in master's and 5% in certificate or outreach programs. Among the doctoral students, 54.7% are male, whereas, 44.8% of the master's students are male.

Enrollment trends over the past five years are contained in the Table below. Each category has witnessed growth over the past five years, with the exception of U.S. women. The latter population saw steady enrollments for four years, followed by a 6.5% decrease from 2010 to 2011.

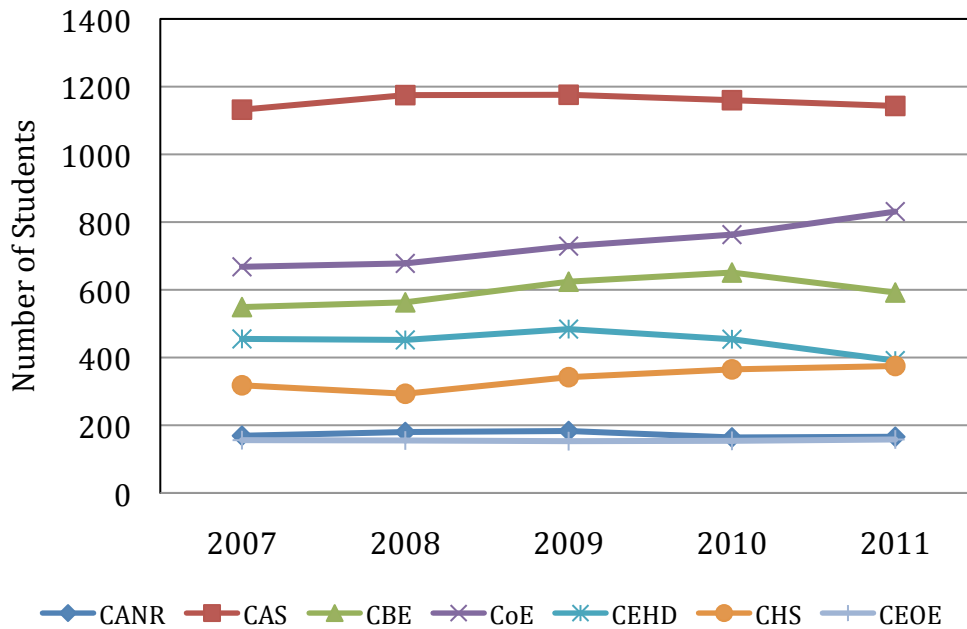
Graduate Enrollments by Category, 2007-2011

	2007	2008	2009	2010	2011
Men international	523	516	548	562	598
Women international	370	391	432	469	491
Men Racial/Ethnic Minority	150	163	185	195	208
Women Racial/Ethnic Minority	206	225	241	250	253
U.S. Men	1096	1150	1235	1235	1216
U.S. Women	1458	1439	1488	1445	1350
Total Racial/Ethnic Minority	356	388	426	445	461
Total U.S. Citizen/Permanent Res.	2554	2589	2723	2680	2566
Total Enrollment	3447	3496	3691	3711	3656

Total enrollment by College over the past five years, shown on the following page, highlights increases in the Colleges of Engineering and Health Sciences, a slight decline in the College of Education and Human Development and stable enrollments in the other five colleges.

² Throughout this document, racial/ethnic minority refers to U.S. citizens and permanent residents only, consistent with CGS reporting.

Total Graduate Enrollment by College, 2007-2011



The heart of graduate education beats within the departments or college graduate program committees. It is expected that the faculty in the programs criticize their own curricula, debate their own standards of admission and examining procedures, and take steps to improve their own graduate research, teaching and mentorship of students (as discussed in Section IV). As the individual programs and colleges are accountable to the University, the procedures for submitting proposals and program policy statements to the Graduate Studies Committee for the submission of changes in the academic, curriculum or admission requirements of a current graduate program or the request for the establishment of a new program have been clearly defined and are managed by the Office of Graduate and Professional Education. The balance between the unique needs of a graduate program of an academic unit and the interests of the University should be identified in the Graduate Program Policy Statement and are considered by the Committee.

The Program Policy Document is the basis for the authority of the information that is published in the University Catalog. The Graduate Studies Senate Committee reviews the Program Policy Statement of each program in its entirety when a change or new program is sent to the Committee. The template of the Program Policy Statement includes:

Part I. Program History

- A. Statement of purpose and expectation of graduate study in the program.
- B. Date of Permanent Status (or current status).
- C. Degrees offered (include brief description of concentrations, fields, etc.).

Part II. Admission

- A. Admission requirements (be specific about GRE, GMAT, and TOEFL Scores, G.P.A and others).
- B. Prior degree requirements.
- C. Application deadlines.
- D. Special competencies needed (i.e., specific courses or experience).
- E. Admission categories (explain other than regular such as provisional).
- F. Other documents required (i.e., letters of recommendation, essays, portfolios, interviews, writing assessments, etc.).
- G. Must include University statement: Admission to the graduate program is competitive. Those who meet stated requirements are not guaranteed admission, nor are those who fail to meet all of those requirements necessarily precluded from admission if they offer other appropriate strengths.

Part III. Academic (present all information separately for each degree)

A. Degree Requirements

1. List course requirements according to categories such as core requirements, concentration options, electives, research credits and dissertation credit requirements. List number of credits in each category and include total credits required for degree.
2. Give non-registered requirements in detail; includes residency requirements, qualifying examinations (number and format), portfolios, seminars, English proficiency, language requirements, teaching experience, internships, etc.
3. Give procedure for petitions for variance in degree requirements (e.g., course substitution policies, completion deadlines, etc.).
4. Define any grade minimums in courses that are different from University policy.
5. Identify any courses, which may not be used towards the degree (i.e., independent study, pre-candidacy study).
6. Identify expectations of facility of expression in English (oral and written) as part of the degree requirement.

B. Committees for exams, thesis, or dissertations

1. Identify initial procedure for advisor and advisement procedures.
2. Identify each student committee needed and procedures for selecting committee members.
3. Give deadlines for establishing and preparation requirements for comprehensive examinations.
4. Give policies for dates of examinations, grading of committee examinations and retake options.
5. Give guidelines for approving research proposals involving human or animal subjects.
6. Define procedures for thesis/dissertation approval in the department (e.g., role of Department Chair, Dean, etc.).
7. Define departmental and student obligations for finding committee members.

8. Define departmental and student obligations and procedures for changes in committee members.
- A. Timetable and definition of satisfactory progress towards the degree
 1. Academic load (full time & part time) expectations. Define normal progress. Define departmental review procedures for evaluating normal progress and evaluation of performance.
 2. Grade requirements (general and specific). Include any special departmental expectations such as minimum grades in specific courses, limits on special problem courses, etc.
 3. Thesis/dissertation progress timetable guidelines.
 4. Thesis/dissertation defense guidelines.
 5. Forms required.
 6. Identify consequence for failure to make satisfactory progress.
 7. Protocol for grievance procedure if student has been recommended for termination for failure to make satisfactory progress.

Part IV. Assessment Plan

Indicate how the program will be evaluated and assessed. Every learning outcome needs to be assessed in at least two ways. One measure must be a direct measurement (where you can see the student demonstrate their learning). Other measures can be direct or indirect (such as a survey). Success should be measured against the criteria listed including the stated learning outcomes and against whatever objectives have been set forth in the first section of the proposal. Academic units are encouraged to consult with the Center for Educational Effectiveness to develop appropriate learning outcomes, assessment criteria, and benchmarks for success.

Part V. Financial aid

A. Financial Awards

1. Types of awards, policy for granting financial awards, summer appointments, and number of years of support.
2. Responsibilities of students on contract.
3. Evaluation of students on contract.

Part VI. Departmental Operations

- A. General student responsibilities
- B. Student government and organizations (both student and professional).
- C. Travel for professional meetings or presentations.

Future Plans

In the last four years, the faculty have proposed 5 new doctoral programs (3 are interdisciplinary), 15 new master's programs, 4 new dual degrees, added 25 concentrations to programs, established 4 exchange programs, 10 graduate certificate programs and 13 combined bachelor's and master's degree programs (called 4+1) (see Appendix 2 for Committee actions). In addition, two outreach programs with non-degree status have been established in the Lerner College of Business and Economics and in the College of Engineering. There were 6 master's level programs and 3 concentrations disestablished. As expected, there are many curriculum and course revisions submitted each academic year. Also, the College of Education and Public Policy was disestablished

and programs were moved to either the College of Arts and Sciences or the newly named College of Education and Human Development. In the coming academic year, the members of the Senate Graduate Committee plan to engage more proactively in setting standards for graduate programs in the area of writing requirements. In addition, the standards for certificate programs and 4+1 programs are in the process of being codified.

Easy accessibility to the Program Policy Statements by faculty, students and staff has been identified as a critical need for the information chain. The Office of Graduate and Professional Education has begun to publish these documents in the University's Institutional Repository using D-Space.

Selected members of the Graduate Studies Committee serve on the Permanent Status Program Review (PSPR) panel for all programs seeking permanent status. However, the Committee has not had a role in the APR process. Future plans are for the Committee and the Vice Provost for Graduate and Professional Education to have defined roles in this process.

Challenges and Potential Solutions

Faculty members that serve on the Graduate Studies Committee are appointed for two years and due to the volume of proposals, invest significant time as Committee members. In recent times, individual members of the Committee are assigned to conduct a thorough review of specific programs on the agenda so that the workload can be distributed and better prepared for Committee discussion. The Assistant Provost for Graduate and Professional Education provides extensive support to the Chair of the Committee and to the processing of proposals through to the Senate floor. A significant and well-accepted procedure that is used by the Committee is to invite the sponsor of the proposal to a Committee meeting where direct interaction can take place between the Committee members and the author of the proposal.

As the business of the Committee is to review proposals that are brought to it by the programs and colleges, a challenge for the Committee is to have the time to review and consider University-wide policies that impact program quality. An initiative to develop a comprehensive listing of the policies and the development of a calendar for their review is planned for the current academic year.

III. Tracking Academic Progress

Current Status

Each degree from every department or college is a University of Delaware degree. As a result, the process of evaluation of student performance being in concert with the program requirements is a primary responsibility of the Office of Graduate and Professional Education. The Office on behalf of the Colleges recommends to the President and the Board of Trustees that students have met the requirements for the degree. The oversight of academic progress is headed by the Assistant Provost for Graduate and Professional Education and is supported by two FTE staff members.

The Office of Graduate and Professional Education provides quick accessibility to all of the graduate student records for statistical purposes for programs, the Provost, President and the Board of Trustees. The centralized function of graduate student academic records ensures the most accurate and consistent reporting of student academic records. The Office serves as the anchor and authority on graduate student records. The Table below shows Degrees Awarded by Degree Type and Citizenship, 2006-2010. Ph.D. Completion/Attrition by field and citizenship/race/ethnicity is available in Appendix 3. (See, Appendix 4 for a breakdown of the Degrees Awarded showing the ethnicity and citizenship of the students.)

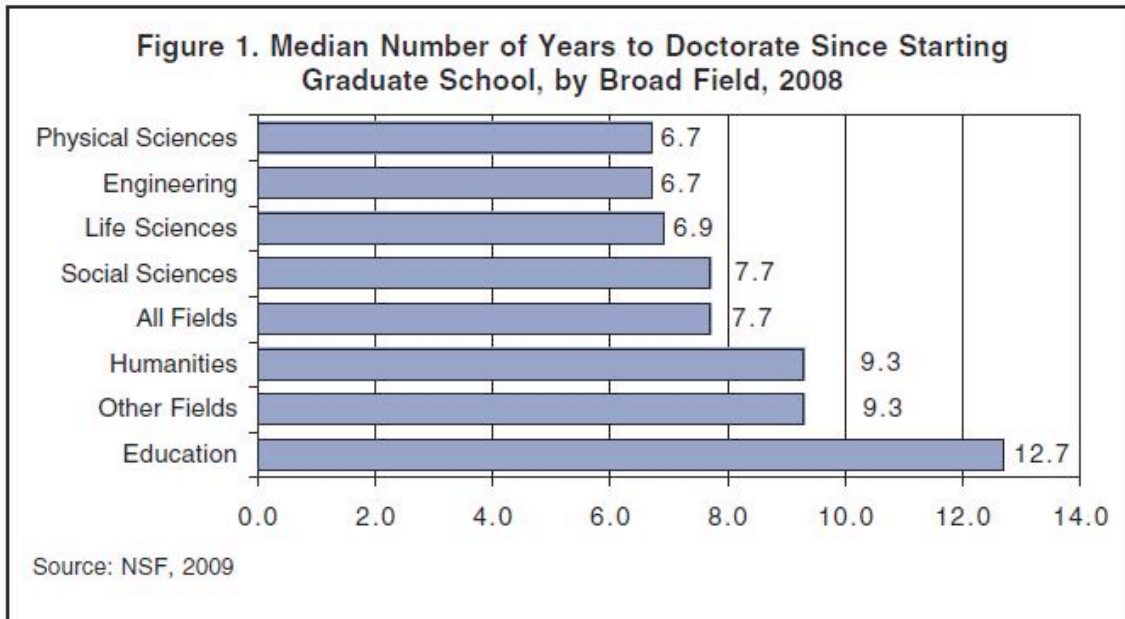
Degrees Awarded by Degree Type and Citizenship, 2006-2010						
Degree Type	Degree Calendar Year	US		Intl		Total
		Count	% of total	Count	% of total	
Certificate	2006	9	100.00%		0.00%	9
	2007	19	100.00%		0.00%	19
	2008	28	100.00%		0.00%	28
	2009	24	100.00%		0.00%	24
	2010	36	94.74%	2	5.26%	38
Doctoral	2006	85	59.03%	59	40.97%	144
	2007	146	66.06%	75	33.94%	221
	2008	155	73.11%	57	26.89%	212
	2009	177	68.34%	82	31.66%	259
	2010	143	61.11%	91	38.89%	234
Master's	2006	435	79.67%	111	20.33%	546
	2007	595	77.47%	173	22.53%	768
	2008	556	77.33%	163	22.67%	719
	2009	567	78.64%	154	21.36%	721
	2010	568	76.96%	170	23.04%	738
Specialist	2006	5	100.00%		0.00%	5
	2007	7	100.00%		0.00%	7
	2008	10	100.00%		0.00%	10
	2009	7	100.00%		0.00%	7
	2010	8	88.89%	1	11.11%	9
Grand Total		3580	75.88%	1138	24.12%	4718

Time to Degree Completion

Between 2007 and 2010, the total number of graduate degrees awarded each year at the University of Delaware has been between 941 and 981. The number of doctoral degrees awarded between this same time period ranged from 212 to 259 and the number of master's degrees awarded ranged from 719 to 768. Prior to 2007, the number of degrees awarded was much lower with 695 degrees awarded in 2006 with 144 Ph.D. degrees awarded.

The length of time it takes to earn a doctoral degree is a concern to many graduate school administrators, faculty and students. While the nature of doctoral education in the United States necessitates a multi-year combination of course work, research and

dissertation writing, a lengthy time-to-degree results in high opportunity cost to doctorate recipients who may not enter the workforce until their early thirties. Per the SED Summary Report (NSF 2009), the median for the measure of time-to-degree for students who completed a master's as well as a doctorate was 7.7 years but there was considerable variation by broad fields with recipients in physical sciences and engineering attaining degrees in the shortest time and those in education, attaining degrees in the longest time. (See the NSF report below.) Per the report, the median has dropped in the last 5 years indicating that much improvement has occurred from the early 2000s.



The time-to-degree for students (see chart on next page) who completed Ph.D. degrees at the University of Delaware between 2002 and 2011 shows that the median time for degree completion for the students who completed Ph.D. degrees in the Social Science programs is 12.0 semesters (6.0 years); in the Humanities is 18.0 semesters (9.0 years); in the Sciences in 13.0 semesters (6.5 years); and in the Physical Sciences is 14.0 semesters (7.0 years). Caveats affecting the variations in time-to-degree by specific programs within the grouped disciplines relate to programs that are part-time rather than full-time, stop-out students who return and complete the degree, and differences in the nature of research and research funding. The time-to-degree data provide an important benchmark but the data do not take into account students who fail to complete their doctoral programs. (See, Appendix 3 for a breakdown of these charts showing the ethnicity and citizenship of the students.)

Time-to-degree completion. Ph.D. Degrees Awarded, 2002-2011

Area	Discipline	Number of Students	Average Semesters to Degree	Min of Semesters	Max of Semesters	Median
Physical & Life Sciences	Animal Science	7	11.29	7	19	10
	Biological Sciences	41	12.32	9	18	12
	Biomechanics and Movement Science	48	10.06	7	16	10
	Chemistry and Biochemistry	158	12.22	5	22	12
	Climatology	11	11.73	7	20	11
	Entomology and Applied Ecology	6	10.17	6	17	9
	Geology	9	14.44	6	26	11
	Linguistics and Cognitive Science	31	11.90	9	20	12
	Marine Studies	68	11.35	3	17	11
	Oceanography	18	11.22	8	18	11
	Physics	61	14.20	8	24	14
	Plant and Soil Sciences	43	10.42	6	15	11
Psychology	53	13.42	10	23	13	
Physical & Life Sciences Total		554	12.07	3	26	14
Mathematical Sciences & Engineering	Chemical Engineering	144	11.02	5	16	11
	Civil Engineering	62	11.65	6	23	11
	Computer Science	50	13.08	8	26	13
	Electrical and Computer Engineering	106	10.70	4	23	11
	Energy and Environmental Policy	20	11.95	7	18	12.5
	Materials Science and Engineering	76	11.21	6	18	11
	Mathematics	32	11.94	7	15	12
	Mechanical Engineering	53	11.45	8	22	11
Mathematical Sciences & Engineering Total		543	11.38	4	26	13
Humanities	Art History	39	19.03	12	31	18
	English	42	12.50	6	21	12
	History	44	17.84	8	34	17
	Preservation Studies	1	8.00	8	8	8
Humanities Total		126	16.35	6	34	18
Social Sciences	Criminology	12	10.50	6	15	10.5
	Economics	47	12.62	8	25	12
	Education	55	12.91	6	24	12
	Educational Leadership	145	10.21	5	25	10
	Human Development and Family Studies	29	11.59	6	19	11
	Political Science and International Relations	24	11.71	7	23	10
	Sociology	30	12.20	8	20	12
	Urban Affairs and Public Policy	59	12.15	6	32	11
Social Sciences Total		401	11.50	5	32	12

Various graduate programs have received national ranking and recognition of quality. These include:

- Biomechanics and Movement Science (NRC)
- Chemical Engineering (NRC); 10th by U.S. News and World Report
- Environmental Engineering; 38th by U.S. News and World Report
- Civil Engineering; 53rd by U.S. News and World Report
- Computer Science; 61st by U.S. News and World Report
- Electrical Engineering; 75th by U.S. News and World Report
- Linguistics and Cognitive Science (NRC)
- Materials Science and Engineering (NRC); 45th by U.S. News and World Report
- Mathematics (NRC); 76th by U.S. News and World Report; top 100 in Shanghai Jiao Tong University's Center for World-Class Universities

- School of Public Policy and Administration (U.S. News and World Report)—41st among 269 national public affairs programs; 10th in city management; 16th in nonprofit management; 33rd in public administration management
- Education ranked 26th tied with Pennsylvania State University by Best Graduate Schools U.S. News Media Group
- UD's graduate engineering programs ranked 45th tied with Brown, Case Western Reserve and Iowa State universities
- Part-time MBA program; 121st by U.S. News and World Report
- Doctorate of Physical Therapy; 4th by U.S. News and World Report
- Top 150 universities around the globe by Shanghai Jiao Tong University's Center for World-Class Universities considered to be one of the most influential world rankings

Future Plans

In 2006, the Office prepared a comprehensive report for each graduate program that included a benchmark study, historical data of application information such as number of applications, applicant demographics, and matriculation and completion, retention, and funding of students between the years of 1991 and 2006. In 2006-7, the University implemented the student record system using PeopleSoft and now in 2011, the University is upgrading the 8.9 version to the 9.0 version. The implementation to PeopleSoft environment totally changed the reporting structure and former standard reporting capabilities of the University. The Office will now undertake to publish a comprehensive report from the timeframe of 2007 to the present and begin to present annual departmental reports. The annual reports will be made available to the Graduate Studies Senate Committee for its review and discussion.

The Office has set the goal to join efforts with Institutional Research to provide reporting options using COGNOS so that graduate program offices can generate reports at their command. The graduate program offices have requested this as a high priority need and plans are in place to deliver various “packages” in the coming year. At present, the OGPE Program Support Specialist furnishes ad hoc reports to the departments upon request.

Challenges and Potential Solutions

The Office of Graduate and Professional Education is the advocate for graduate education at the University of Delaware. Having a voice with authority is a challenge in a decentralized system where the Deans are not under supervision from the Office of Graduate and Professional Education. The pattern of the University of Delaware's administrative organization that does not have a Graduate Dean clearly dictates the Office's culture. As the charter and by-laws clearly define the authority and has clearly designated it through the University Faculty Senate, the Office of Graduate and Professional Education needs to be effective in providing wide discretion in the communication of policy, in negotiating adjustments to respond to the programs and to provide reflection and judgment about university graduate programs. The Office's responsibility is to provide leadership in the comprehensive and critical evaluation of the graduate programs at the University. Excellence in graduate education depends upon

outstanding performance at both the individual and the program level. The OGPE needs to be a leader in the definition and promotion of program excellence. In recent decades, the expectations in teaching, scholarship, and service that new graduates face have escalated. Students can no longer achieve success by mastering research and technical skills in graduate school while waiting until they are on the job to learn the art of teaching, the ethics of practice, the responsibilities of service and the navigating of professional organizations. These abilities must be built into the graduate education process in order to ensure our graduates are competitive in the job market and successful in their careers. Issues that graduate programs face at UD include having adequate resources for staff assistance, faculty graduate advisors, space, and student financial support. There is a need for programs to ensure that faculty members are sensitive to student morale, are actively engaged mentors with up-to-date knowledge about program requirements, communicate expectations of performance and provide regular feedback about performance, and provide strategy on the placement process and assisting students in preparing placement materials.

Other programmatic issues where the OGPE could be the leader in building excellence into the graduate education process if resources were available would include:

- Resources for cluster of faculty and students to form scholarly communities
- Provide funds for students to do scholarly research, present and publish papers
- Review the allocation of resources to be based on merit
- Develop programs that prepare students for non-academic carrier paths or teaching with as much seriousness as for research
- Bolster graduate student participation in program governance to the extent that it is appropriate via the Graduate Student Senate.

IV. Orientation and Mentoring

Current status

Orientation for newly admitted students is conducted by individual graduate programs. In certain cases, the OGPE participates in the graduate student orientation programs. Many of the programs continue the orientation of their students with regularly scheduled programs throughout the semester. The Office organizes a New Graduate Student Convocation each fall for all newly admitted students. The Program includes remarks from the President, Provost, College Deans, the Vice Provost for Graduate and Professional Education and the Graduate Student Senate President.

The Office of Graduate and Professional Education began a pilot program for the Fall 2011 semester called the New Graduate StUDent Connect Program. Current graduate students have been identified as Graduate Student Ambassadors who are leaders of clusters of new graduate students. The goal of the program is to mentor new students and connect them to other students so as integrate them into the graduate community. The students in the clusters are placed randomly, that is they are not be organized by academic programs. The Ambassadors are in email contact with the students prior to arrival at UD and then continue to organize either group or individual interactions upon arrival and throughout the academic semester. The Ambassadors are provided with \$500 for programming costs. There are two graduate assistants supervised by the Assistant

Provost for Graduate and Professional Education who are collecting the information about the experiences of the clusters, meet with the Ambassadors to coordinate their efforts, and are charged with developing a program that can move from a pilot program to a formal mentoring program for all new graduate students in Fall 2012.

The graduate students are organized as a Graduate Student Senate. There is a student representative from each program that is a Graduate Student Senator. The Senate's constitution provides a committee structure for graduate students to have a voice in the culture of graduate students. In addition, graduate students are voting members of various University Committees such as the Graduate Studies Committee, the Faculty Senate, the Diversity Committee, etc. Through the Office of Graduate and Professional education, there are many registered graduate student organizations. They range from students organizations in their academic department to cultural organizations to service organization, etc. These graduate student organizations are self-supporting in that there is not a graduate student activity fee charged to graduate students. These organizations have officers and a faculty or staff sponsor. The Office supports these organizations as needed with advisement and scheduling of university facilities.

A specific orientation program is conducted for new international students. The Office for International Students and Scholars and the Office of Graduate and Professional Education deliver this program to the new graduate students arriving in the fall and spring semesters. The focus of this program is to provide information to the international student concerning their acclimation into graduate school, understanding the culture of education in the United States, and to inform the students of immigration requirements so as to remain in good standing.

Also, for international students, the Office of Graduate and Professional Education and the English Language Institute sponsor a four-week orientation and language/pedagogy program for new international students who will have been offered a teaching assistant position. All such students are required to participate in the program and receive a stipend. The student is evaluated and departments are informed of the level of interaction and the level of the role that the student may have as a teaching assistant. The Office supports a continued English language tutoring program in the fall semester for those students who continue to need language development.

The Center for Teaching and Learning sponsors a two-day Graduate TA conference that is a required workshop for all new teaching assistants.

Future plans

The Office of Graduate and Professional Education has in its planning stages the continued development of a series of orientation programs that are offered throughout the semester both with the target of new and current graduate students as well as programs around specific topics that relate to graduate students in general. For example, introducing graduate students early to software that can enable them to build a bibliography of materials, workshop on documentation in writing, using the style manuals for thesis and dissertation writing are just some of the topics being considered.

The goal is to provide an earlier introduction to these topics realizing that covering all of these topics in one session at the beginning of a semester has not been a productive approach.

It will be important to continue to develop and expand the mentoring and graduate student community efforts begun this year. Both the Ambassador and the racial/ethnic minority student programs can lead to effective and sustainable change. However, both require thoughtful attention and oversight. Periodic review and evaluation of these programs needs to be built so that, among other aspects, we understand the strengths and shortcomings of these efforts. Leadership from OGPE staff that includes training, ongoing support and assessment of the student leaders in both programs will be critical and undoubtedly present challenges. Any efforts to expand these programs will require additional resources of staff time and funding.

In order to design an effective and replicable model for fostering a sense of community among graduate students and helping new students transition successfully, the office has a project underway to identify a comprehensive mixture of targeted initiatives, a clear understanding of how these activities relate, and methods and measures to assess these initiatives. The project includes examining national best practices for graduate mentoring.

The Office is initiating web-based tools and social/media networking sites that can be leveraged to help connect graduate students and improve communication between the OGPE and current students. Specifically, OGPE launched its Facebook page in September 2011, and thus far the feedback has been positive. Expansion of Facebook groups within OGPE to target sub-groups in under current development.

Challenges and Potential Solutions

The demographics of the population of graduate students are complex. (See Appendix 5 for comprehensive enrollment, 2007-2011.) The ratio of doctoral to master's students and the ratio of full-time to part-time students affects the culture of the community of graduate students. In addition, the structure of moving some graduate courses to evening courses to align with part-time students has impacted the ability to schedule meetings and events. The University of Delaware has not provided graduate students with a designated community space where this cross section of students can interact (Section IX delves into this issue). Without such a space, the development of a strong sense of community among the graduate students is challenging to enable. As a result, graduate students tend to remain connected primarily to their academic program. The Graduate Student Senate plays an integral role in connecting the full-time students to each other from all of the programs. The Senate faces the challenge of energizing the students to take an active role in activities and leadership outside of their departments due to their demanding schedules and academic rigors.

Mentoring encompasses a variety of ways for assisting and supporting graduate students throughout their graduate education and beyond. Formal evaluation of graduate student satisfaction by the Office of Graduate and Professional Education is in its

infancy. In spring 2009, the Office of Graduate and Professional Education sponsored a Graduate Student Survey. In that survey, 83% of the graduate students either agreed or strongly agreed that their graduate student experience is intellectually stimulating and that other graduate students in their program are welcoming and supportive. However, less than half (49%) of respondents selected agree or strongly agree with respect to the statement that they receive sufficient career guidance. A large majority responded that they are satisfied with their advisor (78%). The students responded (79%) as very satisfied with their relationship with faculty in their program. Nearly 8 in 10 reported that they are satisfied or very satisfied with their UD graduate student experience. The results of the survey with regard to various aspects of campus life show that they are most satisfied with security and safety on campus followed by relationships and interactions with other graduate students. Graduate students are less satisfied with campus organizations, fitness and recreations opportunities, and entertainment. Sixty-four percent of the students reported that they were not in favor of a graduate student comprehensive fee.

A web-based exit survey has been in place for two years for students who complete degrees. At present, the survey results have not been tallied and analyzed. Some early indications show that course availability and scheduling is concerning in small programs, the expertise and teaching style is very important to graduate students, availability of faculty is important, the relationship and counsel from thesis/dissertation advisors is significant to the success of the student, supplies and equipment for their research are accessible, library services and resources are excellent, computer software is sufficiently available, there is a wide variation of TA responsibilities among programs, and the services and staff of OGPE are highly respected. A future challenge for OGPE is to gather a higher response rate to the survey so that it becomes a useful tool in the evaluation of graduate programs and the experiences of graduate students.

V. Graduate Admissions

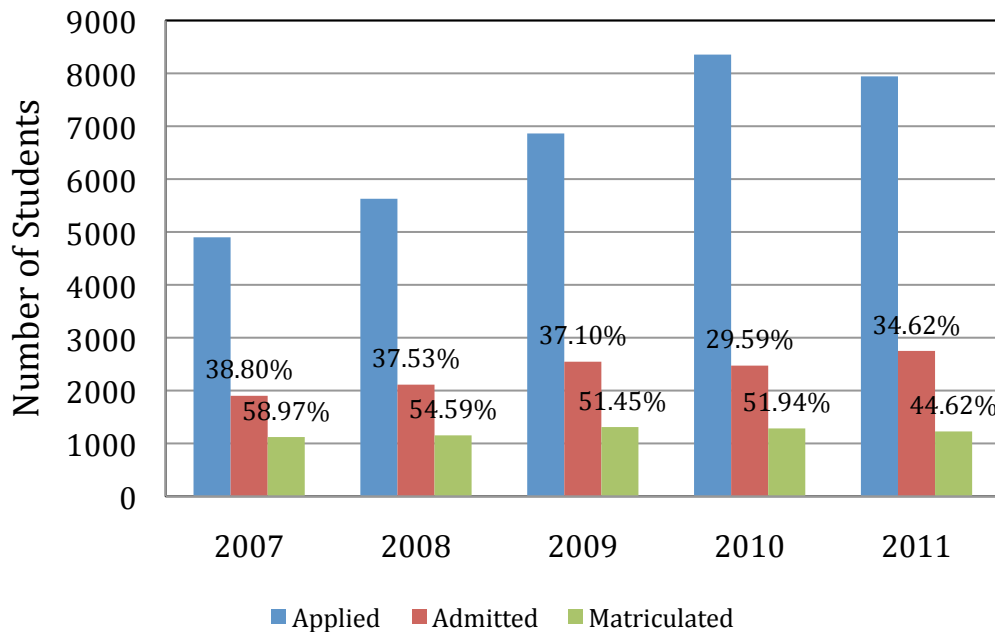
Current Status

The Council of Graduate Schools identifies three categories of graduate admissions—centralized, decentralized, and collaborative. The University of Delaware follows a collaborative model, characterized by supporting the review and decision recommendations of the graduate programs and ensuring University and program level admission policies are met. University level compliance includes, but is not limited to (1) international degree evaluation for U.S. equivalency combined with institutional recognition by the home country's own Ministry of Education, (2) English proficiency via minimum TOEFL, IELTS or other approved methods, (3) any additional conditions of admission specified by the programs in their policy statements. In addition, collaboration with the Office of International Students and Scholars take place regularly to ensure degree type is appropriate with the applicant's current and/or requested visa status. The graduate admission functions are led by the Assistant Director and two FTE staff members. Using the recently acquired Hobsons ApplyYourself system, the Assistant Director serves as the System Administrator, managing each program's unique application requirements, term availability, deadline enforcement, specific supplemental document upload requirements, number of recommenders, and test scores. The Assistant

Director also carries out all PeopleSoft integration and testing issues as they relate to the application, test score mapping and downloads, as well as any new request from the graduate programs that requires implementation. The past two years have seen significant streamlining in concert with the implementation of the new application system and now all aspects of the application are handled online.

Over the past five years, total graduate applications to the University have increased significantly, from 4899 in 2007 to 7956 in 2011, a growth of 62% over these five years. Selectivity (defined as the number or percentage of offers made) ranged from 30-39%. During the same time interval the number of matriculating students increased 9% from 1121 to 1227 new students.

Applications, Offers and Acceptances, 2007-2011



Percentages indicate percentage of offers made to those who applied, i.e. admitted/applied (over red bar) and percentage of acceptances of those who were admitted, i.e. matriculated/admitted (over green bar).

International applications have been the main engines of growth in 2008, 2009 and 2010. During that time, international applications grew on average 25% per year (Appendix 6). This growth has followed national trends, as outlined by the Council of Graduate Schools in their August 2011 report.³ While national data is not yet available for 2011-2012 year, graduate applications to the University of Delaware by international applicants saw reduced, though continued growth in 2011 with an admission rate of 27% and a yield rate of 28%. The country with the highest overall representation among

³ “Findings from the 2011 CGS International Graduate Admissions Survey, Phase II: Final Applications and Initial Offers of Admission,” Nathan Bell, Council of Graduate schools, August 2011.

applicants outside of the U.S. remains China, which grew from 46% of all international applicants received by UD in 2007 to 68% of all international applicants in 2011.

With regard to the U.S. citizen/permanent resident applicant pool, after five years of growth, a decline of 12% occurred in 2011. 870 new U.S. citizens/permanents resident students matriculated in Fall 2011, a drop from the high of 1009 new students in 2009. The most significant drop came among part-time applicants, which saw a 44% one-year decline (Appendix 7). Again, it is unknown as yet if this is part of a national trend as 2011 graduate data is not yet available. Despite admission offers to part-time applicants at a five-year high of 83%, and a relatively strong yield rate of 78%, only 211 new part-time U.S. citizen/permanent resident students matriculated in 2011, a five-year low. Admission offers to U.S. citizens/permanent residents overall remained steady this year at 44.5% with a yield rate of 59% (Appendix 8).

Overall, racial/ethnic minority applications dropped by 14% in 2011, although racial/ethnic minority applications to Ph.D. programs grew by 6% (Appendix 9). Among the population of racial/ethnic minority Ph.D. applicants, admission offers in 2011 were at 33% with a yield rate of 46% (discussed further in the section on Diversity). The subset of racial/ethnic minority applications that saw the largest decline were part-time racial/ethnic minority applications, which took a stark tumble, declining by 58%, after five years of growth. This category's change explains the drop in overall racial/ethnic minority applications.

Future Plans

General admission policy and procedure discussions via the Graduate Council and/or Graduate Faculty Senate have not taken place for some time. The University's published minimum TOEFL (iBT) is 79, but for students who are to be appointed as teaching assistants, it is 100. Many programs evaluate the applicant's speaking abilities through direct conversations either by telephone or Skype and/or by utilization of UD's English Language Institute staff. A formal study of the correlation between the iBT score and student performance is planned so as to determine whether the University minimum score is a proper indicator that should be used for admission to graduate programs.

Conversations about application deadlines should be more widely engaged so that programs are better aware of options, such as including earlier international application deadlines. In the near future, the roll-out of admission surveys will take place to understand our applicants experiences with each stage of the process, where those who declined our offers went to and why, as well as to learn what went well and what did not go well from students who accepted our offers. Finally, tracking of particular applicants such as those to the Fulbright program, diverse enrollments, and incoming students with unique backgrounds need to be gathered and disseminated. In doing so, we aim to heighten the visibility of our graduate programs and their students.

Challenges and Potential Solutions

Potential solutions include the continued development of the two admission staff members, who have been sent for international transcript evaluation training sessions and

are functioning very independently in their support of the seven Colleges. The admission application website should be developed to more clearly display international academic credentials with a chart by country of the minimum level of degree required by applicants from specific countries. Regarding the role for the Assistant Director, thought might be given to how aspects of new student entry might be shifted to her responsibilities, freeing other areas of the office for greater efficiency and productivity.

VI. Recruitment

Current Status

Five of the six identified Milestones in the Path to Prominence™ call for the recruitment of a highly qualified, diverse and global population of graduate students. The University offers more than 150 graduate master's and doctoral degrees and certificates, with new programs added each year. The challenge in recruiting is in meeting the very wide range of needs presented by so many different graduate programs that face a unique set of "comparator" competition, offer unique research or professional experiences, differing pre-requisite coursework for entry, and vary in their funding packages. In addition, they need to maintain key pipelines via regular communications and marketing materials timed to coincide with their unique schedule of events, lectures, conferences, and coursework. For these reasons of complexity, along with the lean budgetary structure, OGPE has not been in a position to meet all these needs. Still, many recruitment efforts on behalf of graduate programs at a higher and broader level are best leveraged from OGPE, especially where economies of scale can be beneficial. One such example is the implementation of the Hobson's EMT Connect/Prospect and Communication system.

The Hobson's combined systems of Connect (prospect) and ApplyYourself (application) were implemented in 2010. Some programs have made strides in the use of the prospect technology, most of which have professional based programs in their portfolio. Others are in need of greater support and guidance. While only the most basic functions of the Connect prospect system were launched initially, PCS has been instrumental throughout this past year in their support of the continued roll-out of the system. A new kick-off workshop was led by PCS in conjunction with OGPE in August, and PCS continues taking appointments for individuals who want to do more with the system's vast capabilities (A further discussion of the recruitment needs of professional programs is contained in Section X). While the Hobsons company offers both live and recorded training sessions on the use of their products, graduate programs have asked for more central support in learning and utilizing these cutting edge tools such as automated communications, surveys and graphic reporting capabilities. Those conversations are multi-faceted as they represent many discipline specific needs. Nevertheless, OGPE is committed to continuing to evolve broad recruitment initiatives that would benefit all graduate programs at UD.

As an example, cost sharing to purchase GRE scores by category of student interest would be beneficial for all programs and should be pursued. OGPE currently receives UD undergraduate student GRE scores and scores from students who identify UD when taking the GRE exams and migrates this data to its UDSIS student data system.

Challenges and Potential Solutions

Recruitment is an activity in which all individuals associated with graduate programs participate. OGPE can both lead and assist by engaging graduate programs in enrollment management discussions, during APR's and other review processes. When admissions targets are set and identified via this process, both short term and long term goals can be established. When activities are identified that support stated goals, a broader base of support can be engaged that may have natural affinities with particular recruitment activities. Involvement of current graduate students, graduate alumni, as well as field specific outlets can be pursued. In terms of our recruitment of top, young scholars to our programs we would benefit from knowing how other institutions support multi-year funding packages and whether those efforts have been found to be successful recruitment tools. In professional programs, PCS has already filled a needed gap by learning and supporting the new Hobson's prospect system in which they primarily work with graduate departments who have profession programs in their portfolios. Yet, they are in need of resources should their role be continued or expanded.

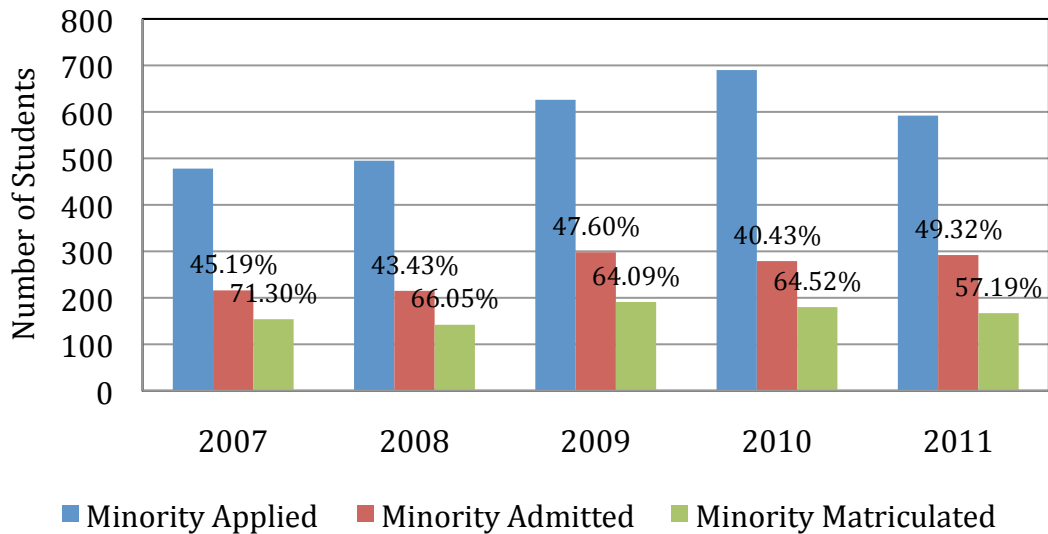
VII. Diversity

Current Status

The Office of Graduate & Professional Education supports the continued recruitment, retention and success of underrepresented graduate students at the University of Delaware. Our action steps include expanding participation of underrepresented groups; developing effective, innovative, and better coordinated recruitment; creating robust retention strategies; and enriching the social and professional development campus climate.

Following two years of strong growth, 2011 saw a 14% decrease in racial/ethnic minority applications. However, the offer rate (49%) reached a five-year high and the acceptance rate (57%) remained strong, albeit, off from the preceding four years, which averaged 66% (Appendix 10). Racial/ethnic minority applications have grown as a percentage of total U.S. citizen/permanent resident applications received from 14% in 2007 to 18% in 2011. With slight gains among racial/ethnic minority Ph.D. applications, as noted below, the overall decline is tied to a large drop in applications to part-time programs, reflective of the multi-year economic downturn (Appendix 11).

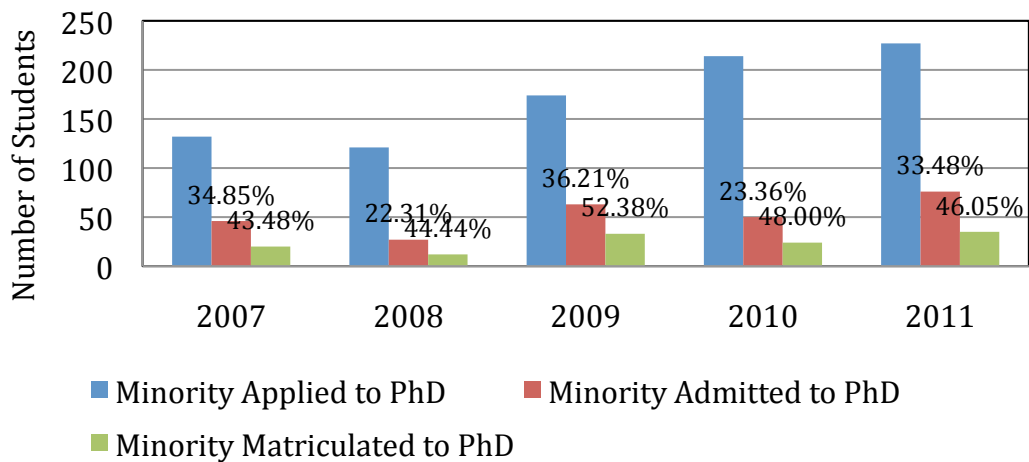
Racial/Ethnic Minority Applications, Offers, Acceptances, 2007-2011



Percentages indicate percentage of offers made to those who applied, i.e. admitted/applied (over red bar) and percentage of acceptances of those who were admitted, i.e. matriculated/admitted (over green bar).

Applications from racial/ethnic minorities to Ph.D. programs showed a 6% gain in 2011, the third consecutive year of growth (Appendix 9). Selectivity and yield for this population were 33% and 46% in 2011, in line with the five-year averages of 30% and 47%, respectively. With regard to racial/ethnic minority enrollment in our Ph.D. programs, these numbers have grown from 11% of Ph.D. enrollments in 2007 to 15% in 2011 (Appendix 12).

Racial/Ethnic Minority Ph.D. Applications, Offers, Acceptances, 2007-2011



Percentages indicate percentage of offers made to those who applied, i.e. admitted/applied (over red bar) and percentage of acceptances of those who were admitted, i.e. matriculated/admitted (over green bar).

Enrollment of racial/ethnic graduate students as a percentage of U.S. citizen/permanent resident enrollments across all programs grew between 2007-2011 from 14% to 18% (Appendix 5). This fall there are 461 racial/ethnic minority graduate students enrolled. Among these, 6.2% are Asian, 7.0% Black/African-American, 3.6% Latina/o, 0.9% multi-ethnic, 0.2% are Native American and 0.1% Pacific Islander (Appendix 5). Over the past five years, both the number and percentage of racial/ethnic minority graduate students have increased for each ethnicity, with the exception of Pacific Islanders. Asian and Latina/o students have seen the largest increases.

In 2010, 25 research doctoral degrees were awarded to racial/ethnic minority students at the UD representing 16.2% of U.S. citizen/permanent resident research doctoral degrees awarded in that year. This rate is comparable to that at Carnegie Mellon (18.6%) and University of North Carolina (17%), slightly higher than University of Virginia (13%), Penn State (13%), and Lehigh (10.8%), and lower than University of Maryland (21%) and Virginia Tech (23%) (IPEDS Research Doctoral degrees awarded, 2010). Overall, the University of Delaware has seen an increase of research doctoral degrees awarded to racial/ethnic minorities as a percentage of the total degrees awarded to U.S. citizens/permanent residents each year for the past three years (Appendix 13).

OGPE is committed to increasing the pipeline, enrollment, and degree attainment of underrepresented minority graduate students. Excellence requires broadening the pool of students that have access to graduate degrees. The Office has been uploading student names from the National Name Exchange and the National McNair programs to the prospecting system making this information readily available to individual programs. By centrally uploading directly to the prospect system, OGPE provides a valuable service to the programs. All prospects receive a single targeted communication with information about application fee waivers. Importantly, the prospect system is integrated with the new application system so that individuals can be tracked from the time they first become a prospect. In response to stakeholder meetings, OGPE developed Diversity web pages on the OGPE main site to share information and raise visibility about issues affecting minority graduate students. These pages list external funding opportunities, conference/presentation opportunities, recruitment events for graduate programs, as well as clear statements about OGPE's commitment to encouraging a holistic review by graduate programs during the application process. The Diversity Outreach calendar site has been developed and is supported via a cost-share model. OGPE provides funds to cover half of registration costs for program coordinators to attend selected, broad-based and high impact recruiting fairs. The Office serves to coordinate and disseminate the logistics of which programs are interested/attending and to provide some University-wide recruiting materials.

In 2011, OGPE launched a program for new and returning racial/ethnic minority graduate students. The objectives are to connect students across disciplines, to welcome new students into the campus community and to foster an inclusive environment. Led by a GA, specific initiatives include an opening weekend mixer and development of a Facebook group designed to foster communication. Additional social and programming events are either planned or under discussion. The GA is also actively involved in

recruiting and outreach activities (Appendix 14) attending McNair and related graduate fairs.

UD hosts an Annual McNair Conference each fall where individuals from around the United States visit the University, have the opportunity to learn of the graduate programs and meet with the faculty in their program(s) of interest. The Grad Fair/Expo is an on-campus, regionally advertised event that serves several purposes including the opportunity to invite high-potential minority students in the region to visit with individual program faculty, to provide opportunities for current graduate students to learn of UD graduate programs, and what they have to offer, and to learn about the application process, partake in guided tours, and learn about application fee waiver categories.

Future Plans

The top priority is the appointment of a Director of Diversity and Student Success. While ensuring that the graduate students and graduate student experience is increasingly diverse is the responsibility of all involved, the appointment of a Director will serve to organize, coordinate and develop initiatives pertaining to the recruitment and retention of under-represented graduate students from a centralized perspective. OGPE is in the process of reclassifying an existing professional staff position from PCS so as to hire a Director this academic year. This new position responds to the clear need to better centralize recruitment functions for graduate programs. A Graduate Assistant responsible for coordination of outreach efforts will support the new Director.

This fall UD expanded the graduate application fee waiver program. Previously, fee waivers were granted to students from McNair, Project 1000 and applicants over 60 years of age. With support from the Provost's Office, application fee waivers are now available to students from the Louis Stokes Alliance for Minority Participation (LSAMP), the National Name Exchange, UD's NUCLEUS program, NSF-Research Experiences for Undergraduates (REU), the Educational Advancement Alliance (EAA), and UD's Arts and Humanities Summer Institute, and UD's CANR Summer Institute. Applicants granted fee waivers will be noted in the Admissions system so that we can carefully track the applicants and review the effectiveness of the fee waivers.

VIII. International Students

Current Status

International graduate student applications are received by the University of Delaware each year from over 120 countries, and the international student body at the graduate level represents at least 80 countries annually. Like most RU/VH institutions, applications from international students have always been strong and, since 2008 at the University of Delaware, have represented more than half the total of graduate applications received. Indeed, international applications have risen by over 20% each year in 2008, 2009 and 2010 (Appendix 6). While the increase in 2011 slowed to 1.5%, international applicants comprised 58% of the total graduate applicant pool. Similar growth has been noted across graduate education nationally, and is primarily due to the number of Chinese graduate applicants.

Enrollment of international students has grown from 893 in 2007 (or 26% of total graduate student population) to 1089 (30%) in 2011 (Appendix 5). The rise in percentage of international students can be attributed to two factors, with one being an 5% decrease in overall U.S. citizen/permanent resident enrollment in 2011 (Appendix 15), and the other being the rising enrollments of graduate students from China (Appendix 16). The story of international graduate students gains greater clarity when looking at the most research focused degree, the Ph.D.

In 2007, international graduate student enrollment in Ph.D. programs at the University of Delaware comprised 41% and has now grown to 43% of the total population in Ph.D. programs (Appendix 12). International students are enrolled in large numbers in STEM⁴ and Economics programs (Appendix 17). This can also be viewed via College level enrollment breakdowns for 2011 (Appendix 18), which are as follows:

CANR: Total Ph.D. is 50, 25 of which are international, or 50% of Ph.D. enrollment.

CAS: Total Ph.D. is 711, 232 of which are international, or 30.7% of Ph.D. enrollment.

Note regarding STEM fields in CAS: 348 Ph.D. enrolled in STEM of which 171 are international, giving a percentage of 49%. This percentage has increased slightly from 46% in 2007 (Appendix 19).

CBE: Total Ph.D. is 46, 32 are international, or 69.5% of Ph.D. enrollment.

CoE: Total Ph.D. is 571, 347 are international, or 60% of Ph.D. enrollment.

CEHD: Total Ph.D. is 75, 15 of which are international, or 20% of Ph.D. enrollment.

CHS: Total Ph.D. is 51, 14 are international, or 27.5% of Ph.D. enrollment.

CEOE: Total Ph.D. is 75, 14 international, or 18.6% of Ph.D. enrollment.

In other STEM degree programs, U.S. citizen/permanent resident students are enrolled in greater numbers than international students, as is the case in the interdisciplinary Ph.D. program in Biomechanics and Movement Science as well as the Ph.D. programs in Marine Studies, Geology, Geography, and Oceanography. Yet, even with this variety present, the total of international students remains high in the STEM fields. As an example, total international enrollment has comprised more than 50% of graduate enrollments in the College of Engineering for the past five years (Appendix 5). More specifically, across all International doctoral enrollments almost half of the students are from China (331) with the next highest enrolled countries being India (72), Korea (46), and Turkey (38) (Appendix 16).

Looking next at master's programs (*not including* certificate and non-degree options), international students represent only 23% of total enrollments in 2011 (Appendix 20).

⁴ STEM fields are defined via the NSF STEM Classification of Instructional Programs Crosswalk located at www.lsamp.org/help/help_stem_cip_2010.cfm

CANR: 116 Master's, 55 are international, or 47% of total.
CAS: 424 Master's, 45 are international, or 10.6% of total.
CBE: 494 Master's, 200 are international, or 40.5% of total.
CoE: 212 Master's, 73 are international, or 34% of total.
CEHD: 184 Master's, 13 are international, or 7% of total.
CHS: 177 Master's, 3 are international or 1.7% of total.
CEOE: 80 Master's, 2 are international or 2.5% of total.

The percentage of international students enrolled is smaller at the master's level compared to the Ph.D. It is the case that more than half (54%) of international master's students are from China (254), with the next largest enrollments from India (74), Korea (14), and Turkey (11) (Appendix 16). Of note is the higher rates of Chinese master students are not limited to the STEM and Business programs, but are largely driven the master's programs in Accounting, Business, Finance, as well as Economics.

OGPE has long provided myriad support for international graduate students. Indeed, for many years and until recently, the Office of International Students and Scholars (OISS) was housed within OGPE so as to foster the daily collaboration required to support International graduate students with their academics needs, visa requirements, funding, research and, ombudsman-related issues. OISS recently underwent a program review. Consequently, its structure, resources and mission are being examined and redefined to better align with the needs of a growing international community and with the goals of the globalization of campus. In the next year, OISS will hire a new director, and take a leadership role in the University's efforts to create a welcoming and supportive environment for international students and scholars. Emphasis will be placed on the academic and social integration of international students on campus, as well as the visa processing and oversight functions for which the Office is often better known. In 2011-12, a new international student and scholar fee (\$100 per semester for registered students) was instituted to augment the revenue required to provide the needed programming, support and infrastructure.

Future Plans

OGPE will continue to be among the leading offices on campus that support international students. We will work collaboratively with OISS to ensure a welcoming and rich campus environment for international students that includes academic and social programming designed to support student success.

OGPE will assess current international graduate recruiting efforts and standing international agreements (MOUs) to identify institutions/regions of commonality where relationships could be developed and expanded. These efforts will include examining centralized international recruiting trips to strengthen and broaden relationships with existing partners and to identify new partners with the goal of strengthening the quality and diversity of the international graduate student population. These efforts will entail collaboration with the Institute for Global Studies, which under new leadership is seeking to expand its research efforts.

Challenges and Potential Solutions

OGPE should take an active leadership role in the University's enrollment management strategies as it pertains to our International graduate student population. A clear and united path forward can be built that results in a graduate student base created out of intention; a graduate student base that strengthens the prominence of the University across the globe; and a graduate student population that can advance the reputation of our research enterprise from countries that have little or no representation at present. The decentralized nature of graduate education presents a challenge to achieving this goal. As a starting point, OGPE can provide program-level admissions and enrollment data to engage faculty, chairs and deans in conversations about international enrollment goals and management.

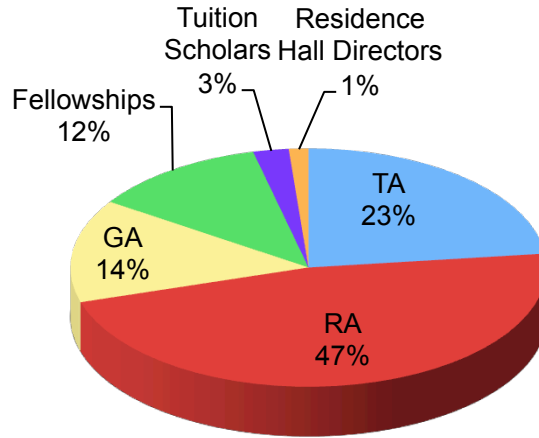
IX. Funding: Stipends and Tuition

Current Status

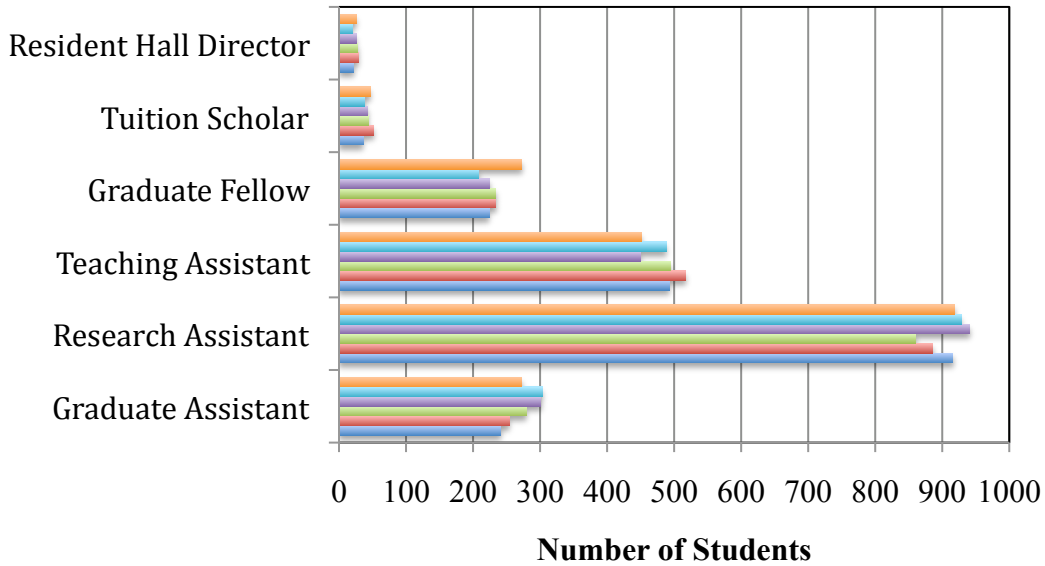
Graduate student support in stipend funding and tuition is a central consideration in the success of graduate education. Multi-year and 12-month funding commitments are important to attract, retain and diversify the graduate student population and to ensure high degree completion rates and efficient time-to-degree completion. Funding levels are benchmarked and set at the program level, with the University establishing a 9-month stipend minimum, a level at which a tuition scholarship typically is provided by the Colleges (more on this later in the framework of the RBB model). In 2011-12, the minimum stipend is \$16,000. Competition serves to drive stipends significantly higher in certain programs, e.g. *ca.* \$24,000 and up for 12-months in some natural science and engineering departments. External fellowships and training grants, e.g. NSF IGERT, offer 12-month funding at \$30,000 and include \$10,500 cost of education allowances. Stipend funding is inexorably linked to the research enterprise, with many programs funding a significant portion of their students via external awards. Of course, the external funding landscape is uneven, with limited opportunities and dollars available for many disciplines.

The figures below show (i) graduate student stipend funding by award type for 2010-11 and (ii) changes by funding type over the past six years. The number of funded graduate students has risen slightly from 1932 in 2005-06 to 1949 in 2010-11, the latter number representing 85% of graduate students who are eligible for funding. The largest categories of funding support are research assistants, 47% and teaching assistants, 23%. Nonetheless, more than 50% of the funded students are supported on internal/state funds. This distribution has remained relatively stable over the past six years. As the internal/state funding stream is unlikely to increase, any growth in the funded graduate student population will be linked, in large part, to increases in research dollars secured.

Graduate Student Stipend Funding by Award Type, Based on Number of Students (Fall 2010).



Award Type by Funded Graduate Students, 2005-2010



2010 2009 2008 2007 2006 2005

The university provides 85% of the cost of the Student Accident and Sickness Insurance Plan and 50% of the cost of the Dental Plan for students who are awarded assistantships or fellowships. Funded students have the option to sign up for payroll deduction for their mandatory University fees.

The current University budget structure, responsibility-based budgeting (RBB) has decentralized the funding and decision making for graduate student tuition from the Provost to the College Deans. In the prior system, students receiving a stipend at the University minimum or above automatically received a tuition scholarship from the University basic budget. From 1997, when the policy was implemented to today, the minimum stipend increased 78% from \$9000 to \$16,000. (In the past six years the average stipend increase has been 4.1%.) In RBB, the colleges have the discretion to offer tuition scholarships and generally continue to do so, particularly for research-based doctoral students. However, there are modest expenses to the colleges in addition to the value of the tuition scholarship as part of the RBB algorithms related to the college's allocation metrics. For a number of graduate programs, including many professional programs, tuition scholarships are now not generally offered. This is an advantage of the RBB model in that graduate tuition revenue, for example from paying students or derived from grants and other sources, is allocated directly to the colleges. This establishes a clear incentive for colleges and departments to build and establish programs that can generate graduate tuition revenue. For example, in the past two years two professional science master's degree programs, in bioinformatics and biotechnology, have been launched as well as several new graduate certificates.

However, a cautionary note concerns the encouragement to derive graduate tuition from grants and contracts, where feasible, and the related ongoing discussion of charging a portion of the tuition to grants and contracts for all externally funded graduate students. While there is an appreciation the University is unusual in not charging at least a portion of tuition against the faculty members' grants, this longstanding practice has positively impacted faculty recruitment and retention. For external funding sources in which the award amount is capped, charging of tuition will reduce the funding available in direct support of research. Certainly in the short term, these policies will reduce the number of graduate students supported via grant funding and thus, the overall graduate enrollment.

University Fellowships. The OGPE administers three competitive fellowship programs that provide stipend support at the University minimum stipend. Presently, approximately 150 awards are made annually. Nominations are solicited from programs yearly. Awards are for one year, and are renewable following the competition guidelines. Students receiving these awards are now guaranteed tuition scholarships by their home colleges. University Graduate Fellows are selected based on their academic achievement, professional commitment and potential for future contributions to their field. Students who have completed at least one year of study are eligible. University Graduate Scholar Fellowships are available to new and continuing students. These competitive awards are consider numerous criteria including challenging social, economic, educational, cultural or other life circumstances, academic achievement, first generation graduate students and/or financial need as determined by FAFSA criteria. University Dissertation Fellowships afford doctoral students the time to focus exclusively on time-to-degree completion. These competitive awards consider academic achievement and the potential for completing the degree within one year.

Concurrent with the implementation of RBB, Delaware in-state tuition for graduate programs was eliminated, setting all graduate tuition at out-of-state rates. Deans have the authority to provide tuition scholarships to address market pressures for individual programs. Some Deans have responded by creating scholarships for Delaware residents. However, the advertised tuition rate is the across-the-board rate. The combination of economic pressures, reduced employer sponsorship, and higher tuition demands on part-time and professional students increase the need to aggressively pursue need-based Federal Financial Aid as well as training grant support for professional programs.

Future Plans

Given the strong linkage between funding and student success, continued emphasis on competitive stipend rates and 12-month funding, particularly in doctoral programs, remains a primary focus. Continuous collection and assessment of comparator institution stipend rates by discipline will permit for data-based advocacy arguments.

Concerning increased external funding, establishing a Fellowship office in OGPE should be considered. The activities of this effort would include a coordinated approach to individual student fellowships and training grant development to advance graduate fellowship funding across campus. Expanded coordination of these efforts with the Office of Proposal Development within the Research Office and the Library would target funding opportunities, such as Fulbright and NSF Graduate Research Fellowships. Also, the OGPE through an enhanced Fellowship function would take a more active role in the development of graduate training grants, e.g. NSF IGERT and NIH, including leadership in identifying emerging areas of strength and expertise on campus in collaboration with faculty leaders and in providing data and boilerplate proposal preparation support in collaboration with the Research Office.

Strengthening and expanding the internal fellowship funding base through increased funding, including fund raising efforts should be explored. The Provost's Office has recently hired a development officer. The OGPE intends to collaborate with the Development Office and the colleges to embark on fundraising for these fellowships. In parallel, we need to review the fellowship programs to assess their effectiveness. This will require data collection of fellowship recipients to evaluate their success (completion rate, time-to degree completion, placement) compared to the overall graduate population.

Challenges and Potential Solutions

As graduate education continues to grow in size and quality, the number of internal fellowships should scale accordingly. While the Provost and Deans have strongly supported stipend rate increases, the number of fellowships has remained constant. Consequently, the competition for resources has increased to the stage where we can not support many meritorious students. A funding strategy that links the number of awards to the graduate student population should be considered. Potential approaches include models that direct either a fraction of F&A return or a portion of graduate tuition generated to graduate stipend support.

The flexibility of the RBB system designed to inspire and reward entrepreneurship, creates specific challenges. In terms of funding, programs have much greater freedom than ever before on campus to offer stipend funding and tuition scholarships. Consequently, there is disparity among funding offers made to students, varying widely, sometimes for students within the same program. The OGPE needs to continue to evaluate the different approaches to graduate student support and advocate for balance and consistency in the name of fairness. A Policy developed last year that ensures tuition scholarships are provided to all graduate students on internal or external fellowships is an example of this approach. Increased communications of criteria for tuition scholarships as well as coordination between college-based scholarships and need-based federal aid will be required to recruit and support professional program students.

X. Professional Programs Overview

Current Status

Professional education presents significant opportunities for the University of Delaware. In addition to attracting graduate students seeking to develop professional careers, professional programs strengthen connections between the University and local business, industry, government and non-profits, creating opportunities for faculty and graduates while contributing to the economic well being and growth of the state and region.

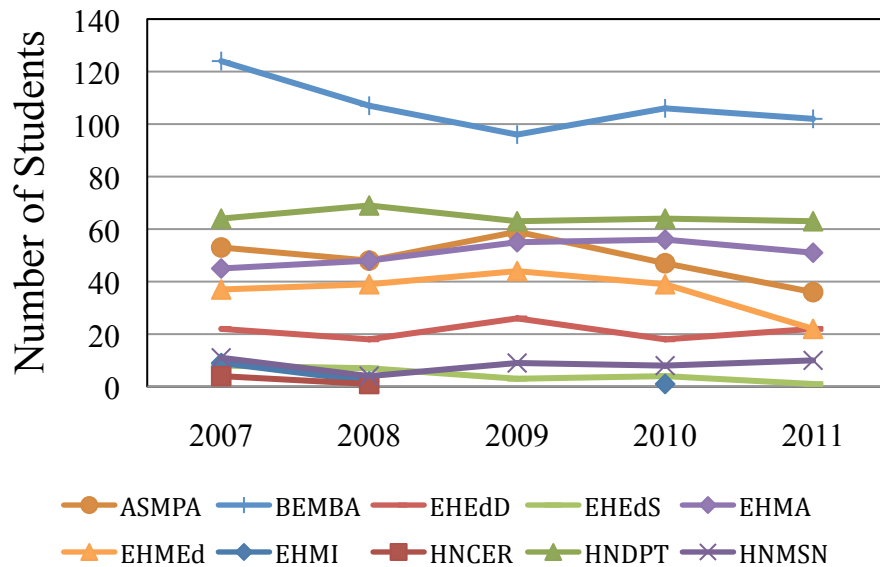
The University of Delaware offers a wide array of professionally oriented graduate programs at the undergraduate, certificate, master's and professional doctorate level. Professional graduate programs consist of graduate-level coursework and experiences that lead to an array of credentials from graduate certificates to professional doctoral degrees. Graduate certificates are usually composed of credit-granting coursework in a defined area and recorded on an official University transcript. Professional Master's degrees are typically (but not universally) composed of coursework and often have a professional paper, project or directed practicum or internship as a capstone experience. The University also offers doctoral degrees in professional fields of education (Ed. D.) and physical therapy (D.P.T.). A comprehensive list of graduate professional areas of study is provided on the professional education website at <http://www.udel.edu/professional/>.

OGPE has actively supported the development of new professional programs. Specifically, OGPE aided the development of the Professional Science Master's (PSM) programs in Biotechnology and Bioinformatics and Computational Biology and was instrumental in obtaining a program development grant from the Department of Labor through the Delaware Valley Innovation Network for the development of PSM programs. Specific program development efforts have focused on outreach by developing industry advisory boards. The advisors were engaged in both program design and in development of internship opportunities for PSM students. OGPE managed the submission process to be officially recognized as PSM programs by the Council of Graduate Schools, and maintains the institutional membership in the National Professional Science Master's Association.

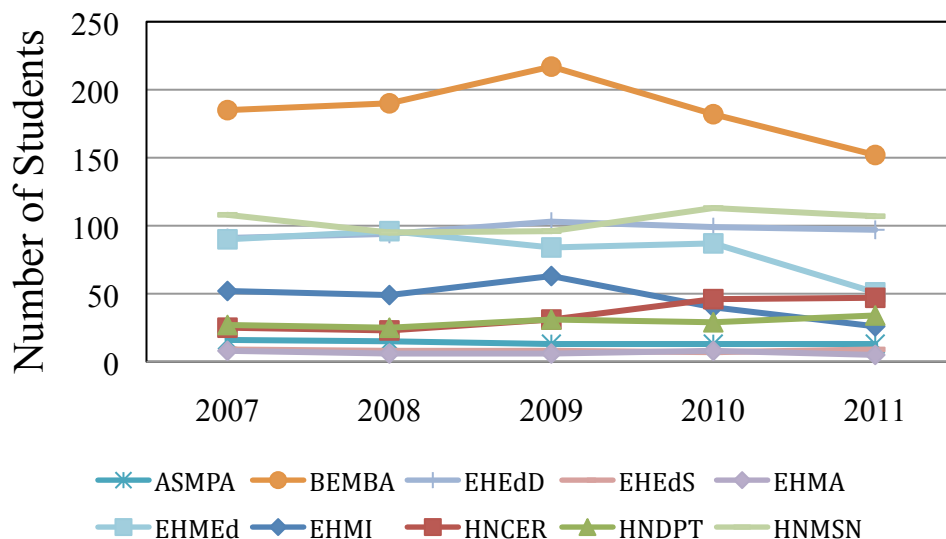
OGPE actively consults with academic departments, graduate Program Directors and Deans in the development of professionally oriented graduate programs. This includes communicating with program developers standards, such as the Council of Graduate Schools standards for PSM program recognition and Federal “Gainful Employment” requirements for non-degree programs. OGPE also actively consults with program developers on learning assessment practices for professional degrees.

It appears that in some cases part-time programs are more sensitive to the economic downturn. For example, part-time MBA enrollment has seen substantial declines in 2010 and 2011, while the full-time MBA program has remained stable. This may be because a growing international population buoys the full-time MBA enrollments. Some programs, which serve a more regional audience, such as educational programs (e.g., MEd, Master of Instruction) have seen declines in both full-time and part-time enrollments. The MPA program similarly has a more regional market and has seen declines in full-time enrollment. In contrast, health related program (e.g. DPT and MSN) enrollments have remained stable. The Post-MSN Certificate program has seen substantial growth, perhaps because it leads directly to advanced nursing certification.

Full-Time Professional Enrollments



Part-Time Professional Enrollments



Employers who subsidize the education of many part-time students are less able and inclined to do so in the current economy. The declining part-time enrollments may be exacerbated by recent changes in graduate tuition for Delaware residents (see funding section IX). The elimination of in-state tuition raises tuition levels for part-time students since they represent a large portion of the Delaware resident graduate student population. The declining employer sponsorship and increasing tuition makes it harder for students to fund part-time professional education.

Funding for professional program development. OGPE was instrumental in obtaining a program development grant from the Department of Labor through the Delaware Valley Innovation Network for the development of the PSM programs. OGPE also partnered in a proposal to NSF for stimulus funding of the PSM program, however that proposal was not funded.

Student recruiting for professional programs. In 2010 OGPE initiated the Graduate Fair, a University-wide annual recruiting event. The Graduate Fair (renamed for 2011 to Graduate Expo) provides an opportunity for prospective students to visit campus, meet program directors faculty and current graduate students and learn about services for graduate students. One feature of the Expo is panel discussions and information booths on resources and services for current and potential graduate students.

Advocacy

Financial aid task force. In 2011, OGPE established the Financial Aid Taskforce in conjunction with the Student Financial Services (SFS) Office. The taskforce is composed of members of Student Financial Services, several program directors, two graduate students and a representative of the OGPE. The purpose of the Financial Aid Taskforce is to address financial aid needs among graduate students. Professional programs are less likely to provide financial support to graduate students in the form of

graduate assistantships or fellowships. Professional program students are more likely to be financing their own education, and thus must have greater access to Federal Financial Aid. Actions of the taskforce have been to improve communications with students and program directors through improved website presence for graduate students, and to seek Federal Financial Aid for graduate certificate programs. Ongoing work will focus on integration of financial aid information with college and program financial aid, improved reporting and information transfer between OGPE and SFS, and ongoing efforts to improve communication with students and program directors.

Career services. In 2010, OGPE engaged the Career Services Center (CSC) to provide enhanced services to graduate programs that require internships for their students. This is particularly important for the new PSM programs since they have required internships but do not have established relationships with internship providers. At this time the need is not critical since the programs are still very small. However, as the programs grow, recruiting and managing internship opportunities will become increasingly stressful for the program directors. CSC has assigned a staff person to aid with outreach for graduate internships. That person has also created customized tools in the online Blue Hen Jobs to facilitate matching of internship opportunities with professional graduate programs and with students.

Outreach and Visibility

Aberdeen Proving Grounds. The Base Realignment and Closure (BRAC) which moved hundreds of U.S. Army civilian personnel from bases in New Jersey and Virginia to Aberdeen Proving Grounds (APG) poses potential opportunities for University of Delaware graduate programs. OGPE has collaborated with OEIP to develop a strategy for providing professional education from programs across campus to civilian employees at APG. The role of OGPE is developing network relationships with training officers in the various directorates at APG to learn of unmet training needs and to network those needs with the various graduate programs at UD.

Delaware Bioscience Association. The Delaware Bioscience Association (DBA) represents an industry sector critical to the economic development of Delaware and the region. OGPE has partnered with DBA to establish networks with small to large biotechnology businesses in the region. In addition to providing a source of participants to the advisory boards for the PSM programs, and networks of potential internship opportunities, DBA provides communication to those involved in, or interested in the biotechnology sector about UD professional programs for student recruiting and student placement opportunities.

Professional Education Newsletter. The Professional Education Newsletter was initiated in 2010 for the purpose of raising visibility of professional education at UD. A primary goal of the newsletter is to communicate benchmarks for quality through showcasing examples of students and programs that reflect the standards for excellence we aspire to. In each issue a theme will help to communicate standards and provide an integrated message. For example, the theme of the spring 2011 issue was, “What is professional education?” For fall 2011 the theme will be, “What’s in it for me: building

collaborations between faculty and industry. “ The tentative theme for spring 2012 will be interdisciplinary programs as the future of professional education. In addition to communicating UD’s successes in professional education, sidebars help to communicate to students and program directors available services.

Professional Education Website. The professional education website was designed to integrate the Professional education options at UD into one easy to find place. Four sections highlight Professional Areas of Study, Professional Science Master’s Degrees, Graduate Certificates, and Online Graduate programs. The professional areas of study were organized by professional practice area as opposed to by college, making it easier for a prospective student to find options within a broader area of interest. The PSM page displays the PSM official logo, defines the PSM degree, and links to valuable information about the PSM degree.

Future Plans

OPGE will continue to advocate for PSM program development including: Clinical Translational Science (Joint with Jefferson), other high profile health science programs consistent with the Health Science Alliance efforts as identified in the Path to Prominence™ and Middle States review, and programs in energy and environmental disciplines.

The Middle States review team report stated that it “seems important for the university community to articulate as soon as possible the dimensions of quality and value which, along with revenue generation, are important for professional education at UD.” The survey of program directors indicated need for data access. The survey also indicated that assistance with program development is an important role of OGPE. Recently we have learned of increasingly stringent requirements for development standards and reporting for gainful employment programs. Additionally, the Council of Graduate Schools is tightening standards for recognition of PSM programs. These come on top of already increasing requirements for learning assessment by the Middle States Commission and professional accrediting agencies. OGPE will need to take a central role in leading the discussion to articulate standards for professional programs. OGPE will be increasingly called on to communicate standards, identifying best practices, and provide data necessary to set and manage stringent quality standards.

The governors’ council in 2010 called for universities to take a more active role in economic development by targeting educational programs to identified labor needs. The federal office of financial aid now requires that gainful employment programs document labor studies that support the need for their programs, and salary studies that demonstrate that educational programs provide return on investment for education dollars spent. The survey of graduate program directors identified an underserved need for assistance with market research to support program development. Professional and Continuing Studies (PCS) marketing and communications staff have some, but limited capability to assist with market research. In the short term they may assist with one or two targeted projects, but in the long term we need to identify ways to support this need.

PCS marketing and communications staff have the skills and some capabilities to aid in advertising efforts. However, their time and financial resource constraints make it impossible to directly assist specific programs. In the short term, efforts will focus on classes of programs such as the PSM programs and graduate certificate programs. These advertising efforts will not focus on specific individual programs, but rather seek to generate market interest in the certificate and PSM programs.

Challenges and Potential Solutions

Graduate program development is the domain of academic departments. The University of Delaware has a very decentralized academic administrative structure which is reinforced by Responsibility Based Budgeting. This raises a number of challenges and issues for graduate professional education. Start-up costs must be incurred to develop and initiate new programs. While RBB funnels graduate tuition back to the colleges, programs must be developed and in place for a long enough period to draw students to generate adequate revenue. Thus up front investment is needed. Additionally, small and start-up programs do not have a critical mass to generate resources for recruiting and other non-course activities. Economies of scale can make advertising and recruiting efforts more efficient. Finally, as tuition increases and fewer employers are paying for education, or placing more restrictive caps on tuition payments, means to help students pay for and finance their education are needed.

Financial services. Professional programs are less likely to fund their students through research and teaching assistantships. While various administrative assistantships are particularly appropriate for students in professional programs such as educational administration, public administration and business, there are not enough of these opportunities to fund many students.

If we expect graduate students in professional programs to fund their own tuition, we need to proactively assist them to gain funding through external sources such as federal government loan programs. Students in professional graduate programs require a different set of support services, such as career planning and placement, than do undergraduates or fully funded graduate students in Ph.D. programs.

There may be limited sources for funding program expenses and student tuition through foundations, and through federal government grants in fields like STEM, Education, and healthcare. One potential activity for OGPE would be to provide assistance to programs, in collaboration with the Research Office, to identify and compete for relevant funding. However, most of these sources require that the PI be from the respective discipline. Since training grants do not typically provide such desirable characteristics as high indirect cost rates, faculty stipends, etc., there may be little incentive to pursue these grants without substantial support from OGPE and the Research Office.

Market research and economic development. While the specific discipline may be in the best position to understand the disciplinary contributions to educational programs, they often do not have the skills to conduct a market analysis to determine the

need and potential demand for professional programs. This leads to the development of programs based on the domains and interests of the faculty, but they may or may not serve an identifiable market or economic development need.

One potential solution is to identify and/or developing additional market research assistance for program development. Basic capabilities to perform such market research exists within PCS and campus entities such as the Center for Applied Demography and Survey Research. The problem is that financial resources and staff time is needed to target activities toward program development research.

Quality assurance. Professional graduate programs must be maintained at the highest level of academic rigor and quality representative of a top research institution. Meanwhile, many professional programs must vie with other educational institutions that compete on the basis of competition and price. Those other institutions can offer programs at much lower prices because they do not have the overhead of a top research university. They can offer programs based on convenience because they rely much less heavily on full-time tenure track faculty, who must balance teaching expectations with time to conduct scholarly research. These issues may in part determine the types of professional programs we choose to offer, by focusing our attention on disciplines that are hard to replicate by low-cost competitors.

Faculty support. The Middle States review similarly identified challenges that faculty face in operating professional programs. Traditional university workload and P&T policies support faculty in undergraduate education, and in traditional graduate education. Mentoring theses and dissertations support faculty scholarship and thus have rewards in the traditional system. However, mentoring professional students, generating and monitoring internships, and supervising professional projects do not often support faculty scholarship. The university does not have clear workload models to support and reward such professional education contributions. OGPE may need to take a central role in facilitating discussions to advocate for the needs of faculty committed to professional education.

XI. Interdisciplinary Programs

Many of today's societal and scholarly challenges are best addressed by interdisciplinary approaches that bring together teams of individuals with disparate training and perspectives working towards common objectives. The complex nature of the problems being addressed at interfaces naturally lends itself to interdisciplinary approaches. Problem solving in an interdisciplinary environment affords an excellent educational structure for new scholars, fostering communication, collaboration and teamwork. Furthermore, the federal research funding landscape has evolved in this direction significantly over the past several years. Today, an increasing number of grants and dollars are being awarded interdisciplinary programs and projects.⁵ For all of these reasons, nationally and at the University of Delaware, interdisciplinary degree programs, centers and institutes are emerging at an increasing pace.

⁵ 2008 National Science Board Report on NSF Funding.
www.nsf.gov/nsb/committees/cpp/2008_idr_congress_report.pdf

Current Status

Faculty hiring has been restructured to better support interdisciplinary research and education. Greater emphasis is placed on ‘cluster hiring’ in which multiple faculty members are hired in research areas of great promise, i.e. energy, the environment and health sciences, across multiple academic departments. These appointments in conjunction with increased interactions among existing faculty members with common research agendas serve to nucleate institutes and academic programs. Campus wide research institutes are numerous (<http://www.udel.edu/research/centers>) and include the Delaware Biotechnology Institute, UD Energy Institute (UDEI), an environmental institute (DENIN), interdisciplinary humanities research institute, the Institute for Global Studies and a rehabilitative medicine institute (DRI). There are also numerous interdisciplinary graduate degree programs. For example, in biomechanics and movement science (Ph.D.), energy and environmental policy (master’s and Ph.D.), economics and education (Ph.D.) and a new program in water science and policy (master’s and Ph.D.). The latter was initiated under the auspices of DENIN. Other graduate programs on the horizon include bioinformatics, and quantitative biology.

Professional programs by nature tend to be interdisciplinary. Some of the most current knowledge on which to found new professional programs comes from interdisciplinary research institutes such as DENIN. As institutes emerge and strengthen, they offer a framework from which academic programs can develop. However, these institutes under current university governance cannot house degree-granting programs. Colleges gain the tuition revenue and bear the costs of delivering graduate programs under the RBB model. The model does not support, and may be a disincentive to reaching across college boundaries to field programs. OGPE will need to take a central leadership role in exploring approaches to solve this dilemma and stimulate interdisciplinary program development.

Like all academic programs, interdisciplinary graduate program review and approval of new programs is under the jurisdiction of the Faculty Senate. The Graduate Studies Committee of the Faculty Senate reviews all matters pertaining to curricular and program development, including endorsing programs for permanent status. Currently, the OGPE works collaboratively with faculty members interested in developing new programs by navigating through the development of program policy statements that will ultimately garner faculty Senate approval. We also provide support and guidance for faculty working groups that are developing new programs. For example, ongoing meetings are developing doctoral programs in quantitative biology and biophysics.

Presently, the structures of interdisciplinary graduate programs vary widely with some housed in a single department and others spanning multiple colleges with leadership and oversight rotating among academic departments. In the majority of cases, degrees are awarded by a single department. However, in some programs degrees may be awarded in one of several different departments spanning two or more colleges. While not advocating for a single model for structuring the administration of interdisciplinary programs, the current approach suffers in that each new program must

develop its own path towards approval and success. Therefore, developing some structured guidance for program development will be critical for future success of new programs and for the continued viability of existing programs.

The funding of interdisciplinary institutes and graduate programs is not considered in the current RBB algorithms. While some programs may be able to subsist on soft funding and gentlepersons' agreements, this shortcoming in the budget model presents an obvious barrier to sustained interdisciplinary work. Indeed, the recent Middle States Review Report responded to the current state of affairs with a recommendation-

“To further advance the [research] vision, we recommend that the designation of funding for interdisciplinary research and interdisciplinary centers be “institutionalized” in the RBB model and that these allocations to the provost’s office be made each year as a high priority.”

As the details of implementing this recommendation are developed, it will be vital to consider the budgetary implications for graduate programs as well as research institutes. The senior administration needs to clearly structure and communicate the incentives such that institutes are positioned to foster collaboration, and not competition, among departments and colleges.

Future Plans

It is clear that many new interdisciplinary programs will continue to emerge at the University. The OGPE needs to provide leadership in this area. In our spring 2011 survey of graduate program directors and other internal stakeholders, the importance of the OGPE in facilitating the development of interdisciplinary programs ranked first in importance among nine areas of services provided. As noted in the Middle States Self Study “the University must work to create an environment that facilitates the development of strong and sustainable interdisciplinary graduate programs.” This can be achieved only through strong leadership provided by the Vice Provost for Graduate and Professional Education in collaborations with the Provost, deans, institute directors and other academic leaders to identify and address the current, inherent barriers towards a more interdisciplinary environment.

Challenges and Potential Solutions

Many, but not all, of the challenges to sustained interdisciplinary graduate programs have been identified. An overarching principle to bear in mind is the symbiotic relationship between interdisciplinary work and the disciplines on which they are based. To have strong interdisciplinary programs, we need robust disciplines. Among the issues that need be addressed are (i) details of the modifications to the RBB algorithms to support and incentivize interdisciplinary graduate programs and research; (ii) review and enhanced alignment of promotion and tenure and faculty workload policies to facilitate and reward interdisciplinary efforts; (iii) consideration of strategies for recruitment and placement of students in interdisciplinary programs; (iv) additional ways to incentivize faculty members to actively participate in interdisciplinary programs.

XII. Graduate Student Professional Development

The OGPE has initiated a number of new programs and worked towards developing stable funding for existing programs with the overarching objectives of setting campus-wide professional expectations for graduate students, and best preparing graduate students for diverse career paths in an ever changing and competitive job market. These programs are designed to augment the significant investment faculty mentors and programs already provide in discipline-specific professional development. These initiatives foster a supportive environment for recruiting and retaining the best students, with some programs, i.e. dissertation boot camps, directly targeting time-to-degree completion. As detailed below, a number of these activities are enriched by collaboration with offices across campus. New student orientation and centralized mentoring activities are covered in Section IV.

Current Status

Funding Opportunities

Professional Development Awards. These competitive awards, administered thorough the OGPE and funded by the Provost, provide funding to support student travel to major professional conferences in their fields of study. Only students presenting their work, either in poster or oral formats, are eligible. Applications include a statement of purpose from the student detailing the centrality of the conference to their work and professional development, a description of the work to be presented and a letter of reference from their advisor. Awards of up to \$500 are available provided the home department or college matches \$300. Student may receive a maximum of two awards during their graduate careers. In FY11, 195 awards were made with an average award of \$373.

Global Research, Internships and Performances. A yearly call for these competitive awards states funding is provided for research travel “that will significantly enhance scholarship opportunities and/or provide interesting and important venues for creative work and internship experiences.” Awards of up to \$5000 are available via this program. Examples of recently funded projects include an energy and environmental policy doctoral student is examining sustainable water management strategies in Andhra Pradesh, India and a linguistics doctoral student is describing an endangered and essentially undescribed language of northern Madagascar. Awardees are expected to report out on their experiences, either in their departments or via public outreach activities. In FY11, \$40,000 was distributed among 15 awardees.

Collection-Based Research and Travel. This program is in collaboration with the Center for Material Culture Studies providing support for short-term travel for graduate students to visit museums, libraries and/or historic sties to conduct thesis and dissertation research. The program, requiring a 1:1 match with the department, provides up to \$300 from our Office. In FY11, eight awards were made with an average award of \$246.

Workshops

Responsible Conduct in Research (RCR). The OGPE collaborates with the Research Office to sponsor the yearly RCR workshop. This two-day event provides

critical training around contemporary research-related issues and helps graduate students and postdocs meet the RCR requirements from NSF and NIH. The sessions are organized into four half-day modules covering the topics of research ethics and misconduct, compliance, authorship, funding opportunities, peer review, copyright and presenting research. Experts from across campus are among the presenters. In February 2011, members of the AAAS staff, including a senior editor from *Science*, conducted sessions on communicating science and an authorship panel. Attendance at the workshops, which began in 2008, averages 177 students and postdocs. Participation in the RCR modules is documented on student transcripts.

Proposal Writing Workshops. Workshops offered each semester expose graduate students on the basics of searching for appropriate funding sources and the nuts and bolts of proposal development. The series have been lead by individuals from the library and the Department of English. Attendance is capped at 25 students. In the last year, the model of these workshops has evolved with greater emphasis on external funding opportunities, using the NSF GRFP and Fulbright Fellowships as target programs.

Dissertation Boot camps. To address the challenges doctoral students often face during the final stages of their academic careers, the OGPE has collaborated with the Writing Center to develop two-week workshops for doctoral students whose writing progress has ‘stalled.’ The structure of the workshops emphasizes the need for devoting daily times towards writing with faculty-led discussions about themes common to dissertation writing including, time management, setting goals, the habit motivation of writing. Participants come from each of the seven colleges on campus. Held during winter and summer sessions, 62 doctoral students attending boot camps in FY11.

Communication and Outreach Skills. The University is committed to developing scholars that are adroit in communicating their work to a wide variety of audiences, ranging from the those technically literate in the discipline, to more general audiences, such as external partners, the community and policymakers from the local to the national levels. A number of workshops, summer institutes and conferences are focused on these activities. Examples include the Public Engagement in Material Culture Institute (PEMCI), a workshop on Public Scholarship in Action for College of Arts & Sciences students and outreach events associated with NSF grants that center on the environment and alternative energy production.

Last spring, the first Graduate Student Forum was held on campus. The event, developed and organized by the Graduate Student Senate, was devoted to celebrating the scholarly accomplishments of graduate students. Two hundred and seventy-five graduate students attended the forum to hear fifty-two graduate student research talks (in 8-minute ‘flash’ presentation format) and more than thirty poster presentations. The evening culminated with dinner and a presentation by *Ph.D. Comics* creator Jorge Cham. Student response to the Forum was overwhelmingly positive. Plans are underway to make this a yearly event.

Academic Career Track Preparation

The Center for Teaching and Learning (CTL) runs a summer institute that seeks to prepare doctoral students for the faculty position search process and for transitioning into their first academic appointments. Focus is directed towards identifying the types of academic institutions to which individuals may be drawn and to preparing the necessary documents (CV, research and teaching statements, cover letter, etc.).

The CTL also conducts a Higher Education Teaching Certification program designed to augment TA training and preparation provided to graduate student TAs. This program targets students who seek an academic career as faculty members. Students structure the content models to best fit their schedules. Certification is noted on the student's transcript.

Future Plans

Several new programs are in the planning stages. A new writing workshop focused on aiding master's and doctoral students in the development of their thesis and dissertation proposal will be piloted during the 2011-12 academic year. The need for such a workshop was identified based on conversations with members of the Graduate Council, graduate students and other colleagues across campus. An outline for this workshop was developed by the Graduate Council and modeled after the successful dissertation boot camps. The pilot will be evaluated with an eye towards improvement and the ability to make it available to a larger number of students. A second workshop aimed at enhancing communication of scholarship is under discussion. The highly successful SUNY-Stony Brook and University of Alberta programs that use improvisation as a vehicle for improving communication and public engagement offer compelling models. Next summer, OGPE intends to send a team, including faculty and staff from the Professional Theatre Training Program and the Office of Communications and Marketing to the Stony Brook summer workshop to learn about their structure with the goal of piloting a similar program at UD.

Challenges and Potential Solutions

While advances have been made in building the funding base to support graduate student travel and provide professional workshops on campus, sustainable and scalable funding remains a significant challenge. A number of these initiatives have been developed using "one time" funds, which are now exhausted. Additionally, as new pilot programs are determined to be of value, the ability to expand the programs is limited by funding and personnel. Some of these collaborative initiatives have relied on the good will of faculty and staff who have 'volunteered' to lead workshops. A more stable funding structure that supports a growing graduate student population and tangibly values the contributions of faculty and staff leaders needs to be developed. Potential models would include (i) deriving revenue from F&A return on grants recognizing that in many disciplines research is conducted by graduate students; (ii) support from the colleges based on the headcounts of students partaking in workshops; (iii) a modest fee for workshop attendance charged to participants; (iv) development efforts led by the Vice

Provost in collaboration with the recently hired Director of Development for Strategic Initiatives. A likely solution might include a combination of these approaches.

XIII. Professional and Continuing Studies

Current Status

The Division of Professional and Continuing Studies (PCS) is an administratively centralized and academically decentralized unit working with the seven academic colleges to provide educational opportunities and services to adult and other nontraditional learners. In FY 12 PCS employs 37 full-time employee staff located at seven locations throughout Delaware. Its budget model includes \$3.4 million in University allocated funding, and an additional \$2.3 million in self-supporting funds. Major program areas include degree completion, online learning, certificate programs, customized learning, pre-college programs, continuing professional education and lifelong learning. Major services include academic and career advising, marketing, financial management, registration services and online testing.

In FY 11, the most recent completed full year, PCS served over 5,000 registrants in noncredit instruction, 6,870 in online learning, and 2,229 in credit courses or degree completion programs. In addition, 14,262 tests for online learning courses were administered in Newark and locations throughout the world. Corporate and government clients included ING Direct, USDA, and Wilmington Trust Co.

The PCS role, vis-à-vis graduate programs, has taken three fundamental forms since it became a division of OGPE. First, it serves as the marketing and communications arm for professional education within OGPE. Examples here include planning, coordinating and implementing with the Associate Provost, Professional Education the first Graduate Education Fair (or Graduate Expo). A second is scheduled for the fall 2011 semester. Also, PCS has provided the editorial support for the semi-annual *Professional Education Newsletter*. Ongoing marketing support is provided through participation in education fairs, email blasts promoting specific programs, and maintaining a web presence as requested.

Second, PCS and OGPE have jointly sponsored a request for proposal process to solicit graduate degree and certificate programs delivered through hybrid, distance learning. To date, proposals for the M.Ed. in School Leadership and graduate certificates in Disabilities Leadership and Historic Preservation have been funded through this process.

Third, PCS' student services arm (ACCESS) has hosted several programs to build connections with professional education programs in Education, Business and Economics, Biotechnology, Bioinformatics, and Urban Affairs and Public Policy. Finally, a staff member from PCS has worked with OGPE in the continued implementation of the Hobson EMT Connect prospecting system.

Future Plans

While the aforementioned achievements provide a foundation for PCS role in OGPE initiatives, future steps are needed. First, a more developed education matrix is needed to demonstrate the pathway for an adult learner from a noncredit certificate program to a professional graduate degree. For example, a student who has successfully completed the certificate in Business Analyst or Project Management is a prime candidate for an MBA or MPA. The long-term effect is for the student to develop an education portfolio for a lifelong learning relationship with UD. Preliminary conversations have been initiated with the Lerner College of Business to this goal. Further consideration of an expanded role of PCS in the delivery of credit granting courses and professional degree programs may be warranted. Some universities have a “College of Professional and Continuing Education” that offers professional degree programs. The primary advantage of such configuration is that such a college can typically be more responsive to market demands and changes than traditional colleges. Pros, cons and applicability of a credit/degree granting role for PCS should be analyzed.

Second, the role of ACCESS as a point of contact for adult students who are undecided as to the professional education program to pursue should be strengthened. Third, conversations with the academic Deans should be initiated to explore the viability of granting on a limited basis graduate credit for students completing certificate or customized learning programs with the requisite academic integrity and rigor. Finally, the role of PCS including resource allocation needs to be clarified within the unit itself and with OGPE. While marketing and communications to part-time adult learners are areas PCS expertise, the current structure does not adequately support all the needs presented by professional graduate programs. The graduate survey further highlights a need for benchmarking professional program demand.

Challenges

Housing PCS in OGPE is a unique organizational configuration with potential for continued maturity. Systematic interface between the leadership and staff of the two is moving us toward that goal. To meet the academic milestone for Professional Education as outlined in the Path to Prominence™, continued program expansion and marketing to adult and corporate stakeholders is an immediate goal.

XIV. Graduate Student Space and Housing

Current Status

The quality and quantity of graduate student work/office space, the allocation of which is under college control, varies widely by program. In some of the more challenging circumstances, for example in some humanities programs, graduate students are allocated office space only during their appointments as TAs. When they move on to RAs and/or are unfunded, their office space disappears. The College of Arts and Sciences has recently acquired some office space on Main Street, allocating it for ~30 graduate students in the arts and humanities. OGPE continues to advocate for the clear need for additional, better quality space for graduate students to conduct their research and support their teaching.

There is no central, common space for graduate students. Such a graduate student commons exists at other, research universities providing a location for graduate students, postdocs and faculty to meet, interact and collaborate. Space for programming, including for the GSS and student organizations, and for social events, would also bring greater visibility to the graduate enterprise and help in integrating graduate students into the campus community.

Graduate student housing has also been identified as an area of need in surveys of faculty and graduate students. Currently, limited housing options exist in Conover Apartments (48 units of which 32 are 1-bedroom, 16 are 2-bedroom) and the Graduate House (7 single resident units). The former contains one- and two-bedroom apartments for married students. The general lack of University housing for graduate students is a competitive disadvantage in recruiting students, acutely so for underrepresented minority and international students. The transition to Newark and the University community is more difficult when housing options are limited and support for finding housing is limited, at best. Housing that is welcoming and accommodating to a culturally and ethnically diverse student population is an important tool for student recruitment and retention. University run housing of this type also offers the flexibility of variable length and start date leases that could better accommodate the graduate student population as well as shorter stay needs of postdocs, visiting students and scholars.

Future Plans

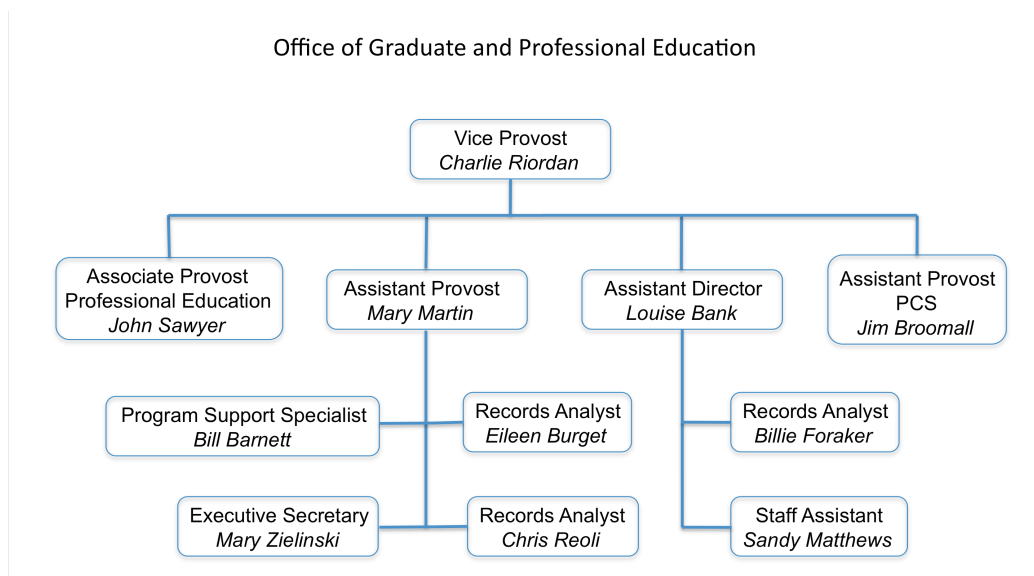
Provide significantly more on-campus housing for graduate students, postdocs and their families. In the next few years, several dormitory complexes (Rodney and Dickinson) are coming offline as they are replaced with new facilities on the east side of campus. One possibility would be to explore renovating the Dickinson complex (Rodney is essentially uninhabitable) for graduate student housing.

There is also a clear need to identify a common gathering space for the graduate student community. With the exodus of the bookstore from the Perkins Student Center to Main Street, there is the opportunity to renovate a portion of the vacated space for a graduate student commons. Ideally, this space would include facilities for social exchanges among students, faculty and staff, meeting space for programming, dedicated office space for GSS and perhaps, other graduate student organizations. There will undoubtedly be competing needs for the bookstore space from other campus units.

XV. Office of Graduate and Professional Education. Staffing and Organizational Structure

OGPE is lead by the Vice Provost, a position created three years ago as an outcrop of the University's Path to Prominence™ strategic plan that sought to elevate graduate education. At the same time, the Office was renamed from the Graduate Office to the Office of Graduate and Professional Education, to highlight our growing aspirations and commitment to professional education. Prior to these changes, the Graduate Office reported to the Vice Provost for Research.

The Vice Provost for Graduate and Professional Education is the chief advocate for all activities graduate. He works with the provost, deans and faculty to advance the highest standards in graduate education, to foster best practices, to ensure the richest support for graduate student success, and to strengthen the diversity of the graduate student population. The organizational chart for OGPE is shown on the next page and the curriculum vitas for the faculty administrators and professional staff are found in Appendix 21. The staff consists of two faculty members with administrative appointments, three professional staff and four salaried staff members. Additionally, 3-4 graduate assistants work with matriculated student programming and general support each year, and six miscellaneous wage employees are hired to assist with the graduate admissions on a seasonal basis to assist admissions during the height of admissions season. The Assistant Provost for Professional and Continuing Studies reports to the Vice Provost, while overseeing all of the PCS operation and a staff of 37 employees.



UD Office of Graduate and Professional Education Organizational Chart

The Associate Provost for Professional Education, a position established in 2009, is a faculty member with a 60% administrative appointment. He oversees professional program initiatives, new program development, seeks to identify barriers to program growth and serves as an advocate for professional education. He also works with the Assistant Provost of PCS to identify areas of synergy between their graduate portfolios.

The Assistant Provost is responsible for oversight of all activities pertaining to enrolled graduate students including academic records and performance, certification of degree completion, graduate student funding, including policies and eligibility. She serves as graduate student ombudsperson, and Office liaisons to the Registrar, ELI, Student Financial Services, Office of International Students and Scholars, and the Center for Teaching and Learning. The Assistant Provost is a member of and secretary for the Graduate Studies Committee of the Faculty Senate. Along with the entire staff, she serves to coordinate special events, i.e. new graduate student convocation in the fall and two doctoral hooding ceremonies (January and May). She works with two records

analysts, whose primary responsibilities are degree audits and review of theses, dissertations and executive position papers.

The Assistant Director has primary responsibility for all aspects of graduate admissions, including supervision of two full-time admissions staff and six seasonal miscellaneous wage employees. The application system is centralized, and thus, the admissions staff are knowledgeable in program admissions requirements, deadlines and FAQs. Key responsibilities include international degree evaluation and verification, ensuring conditions of admission are articulated and met, providing timely responses to prospects, applicants, recommenders and University faculty and staff. The Assistant Director serves as a liaison and resource for program faculty and staff, providing training on all aspects of international document evaluation and verification. The Assistant Director, as outlined earlier has been asked to take a leadership role in the recruitment of underrepresented minority students. In this aspect of her role, she is supported by a GA.

The Program Support Specialist is responsible for data management and oversight and report development. He works closely with IT, Budget Office, Institutional Research and Human Resources to ensure accurate and timely internal reporting of admissions, enrollment and funding data. He is regularly called upon for ad hoc reporting as requested by graduate departments and the Assistant and Vice Provosts.

The Executive Secretary’s responsibilities include maintaining the schedules of, and providing support as requested by the Vice Provost, Associate Provost and Assistant Provost. She responds to walk-in and phone requests of students, faculty and staff and executes changes/updates to the Office web site.

The Table below lists the total office staff and graduate enrollments for a number of peer universities. It should be noted that the structure of graduate education varies widely by institution making direct comparisons challenging. Different program types, reporting and organizational structures exist among the schools listed. Nonetheless, the inescapable conclusion is that the University of Delaware is staffed at a much lower level than the peers listed. This structure presents great challenges in maintaining our current levels of service and calls into question the ability of our current staff to support new initiatives and any growth in graduate enrollments.

Comparison of Graduate Office Staffing.

	Office Staff (FTE)	Graduate Enrollment	Grad Student: Staff Ratio
University of Delaware	10	3670	367
Maryland-College Park	29	10,719	370
Penn State University	38	6639	175
UNC-Chapel Hill	22	10,811	491
Notre Dame	19	3550	187
Virginia Tech	42	7316	174
Brown University	18	2400	133

Staff data derived from Graduate School/Office websites (Sept. 2011). Enrollments from IPEDS, 2010-11.

Challenges

Staff support and office budget needs to be sustainable and commensurate with the scale of graduate and professional education at UD. Despite the clear focus and widespread support for graduate and professional education outlined in UD's Strategic Plan, the challenging fiscal climate and the new budgetary structure have combined to reduce the OGPE operating budget, exclusive of graduate student fellowships (these have remained constant in number and have increased in value at a rate of ~3.3% over the past five years). The recent changes have resulted in new initiatives, most of which have been funded with one time resources.

Potential Solutions

The heightened attention to graduate and professional education as outlined in the Strategic Plan and reaffirmed last spring in the Middle States re-accreditation has resulted in numerous, positive changes across campus. Indeed, as noted in the latter document, the pace of change at UD has been "dizzying." As the scale of graduate and professional education at the University increases its size and quality, the support structure and resource allocation should follow in some fashion. The basic budget for the Office should be tied to the size of the graduate student population.

Given the continued emphasis on and desired growth in professional education, it is critical that the Associate Provost for Professional Education be elevated to a permanent and fulltime position. The responsibilities and success to date of the incumbent demonstrate that full time attention is warranted, with potential to further integrate OGPE and PCS in areas of mutual interest.

Additional staff is also warranted in the following areas to meet the needs delineated above and indeed throughout this document: support for fellowships and awards, program marketing and recruitment, a postdoctoral office, thesis and dissertation review, and IT.

Appendices

- Appendix 1. Listing of the Graduate Programs at the University of Delaware
- Appendix 2. Graduate Program Actions by the Faculty Senate, 2007-2011
- Appendix 3. Ph.D. Completion/Attrition by Field, Citizenship, Race and Ethnicity
- Appendix 4. Degrees Awarded by Degree Type, Citizenship, Race and Ethnicity, 2006-2010
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- Appendix 9. Racial/Ethnic Minority Ph.D. Applications, Offers and Acceptances, 2007-2011
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- Appendix 15. Enrollment by Citizenship and Total Race/Ethnicity, 2007-2011
- Appendix 16. International Enrollment by Country of Origin, 2007-2011
- Appendix 17. Ph.D. Enrollments in STEM Fields by College and Citizenship
- Appendix 18. Doctoral Enrollments by College and Citizenship
- Appendix 19. STEM Enrollments in the College of Arts & Sciences by Citizenship and Program
- Appendix 20. Master's Enrollments by College
- Appendix 21. Curriculum Vitae

Appendix 1. Listing of Graduate Programs at the University of Delaware

As of Fall 2011, the following degrees and programs are active at the University.

Doctor of Philosophy

The University of Delaware offers the degree of Doctor of Philosophy (Ph.D.) in animal science and food science, applied physiology, art history, biological sciences, biomechanics and movement science, chemistry and biochemistry, computer science, criminology, disaster science and management, economics, economics education, education, engineering (chemical, civil and environmental, electrical and computer, material science, and mechanical), English, energy and environment policy, entomology and wildlife ecology, geography, geology, history, human development and family studies, linguistics, marine studies, mathematics and applied mathematics, nursing science, ocean engineering, oceanography, physics, plant and soil sciences, political science and international relations, preservation studies, psychology, sociology, urban affairs and public policy, and water science and policy.

Doctor of Physical Therapy

The degree of Doctor of Physical Therapy (DPT) is a professional degree preparing students to deliver direct patient care in an integrated process that includes examination, evaluation, planning, supervision, and performance of treatment programs.

Doctor of Education

The degree of Doctor of Education (Ed.D.) in educational leadership is offered by the College of Education and Human Development.

Education Specialist

The degree of Education Specialist (Ed.S.) is a professional degree to be awarded to students who hold the Master of Arts degree in School Psychology and who complete the additional 30 credit hour certification requirements as an educational specialist.

Master of Arts

The academic research degree of Master of Arts (MA) is offered in agricultural education, art history, chemistry and biochemistry, communication, criminology, American material culture, economics, economics and entrepreneurship for educators, education, English, foreign languages and literatures, foreign languages and pedagogy, geography, historic preservation, history, liberal studies, linguistics and cognitive science, political science and international relations, psychology, school psychology, sociology, teaching English as a second language, and urban affairs and public policy.

Master of Science

The academic research degree of Master of Science (MS) is offered in accounting, agriculture and resource economics, animal science, art conservation, bioinformatics, bioinformatics and computational biology, biological sciences, biomechanics and movement science, bioresources engineering, biotechnology, chemistry and biochemistry, computer science, disaster science and management, economics, entomology, evaluation, exercise science, fashion studies, finance, food science, geography, geology, health services administration, human development and

family studies, human nutrition, information systems and technology management, marine studies, mathematics and applied mathematics, neuroscience, organizational effectiveness, development, and change, ocean engineering, operations research, physics, plant and soil sciences, public horticulture, statistics, water science and policy, and wildlife ecology.

Master of Applied Sciences

The academic research degree of Master of Applied Sciences (MAS) may be earned in civil engineering.

Master of Business Administration; Master of Arts in Economics/Master of Business Administration

The professional degree of Master of Business Administration (MBA) and the combined professional degree of Master of Arts in Economics/Master of Business Administration are offered as a combined degree program by the Lerner College of Business and Economics.

Master of Business Administration; Master of Science in Accounting, Finance, Information Systems and Technology Management, or Organizational Effectiveness, Development and Change

The professional degrees of Master of Business Administration (MBA) and the combined professional degree Master of Science in Accounting, Finance, Information Systems and Technology Management, or Organizational Effectiveness, Development and Change are offered as combined degree programs by the Lerner College of Business and Economics.

Master of Chemical Engineering, Master of Civil Engineering, Master of Materials Science & Engineering, Master of Science in Mechanical Engineering, Master of Science in Electrical & Computer Engineering/Master of Business Administration. The academic research degrees in Engineering and the professional degree of Master of Business Administration are offered as combined degree programs by the College of Engineering and the Lerner College of Business and Economics.

Master of Education

The programs leading to the professional degree of Master of Education (MEd) are designed particularly for teachers and administrators in the public schools. Majors are offered in reading, school leadership, higher education administration, exceptional children and youth, curriculum and instruction, and educational technology.

Master's Degrees in Engineering

The academic research degrees of Master of Chemical Engineering (MChE), Master of Civil Engineering (ME), Master of Science in Electrical and Computer Engineering (MS), Master of Science in Mechanical Engineering (MSME), Master of Materials Science and Engineering (MMSE) are conferred under the direction of each of these departments in the College of Engineering. A non-thesis Master of Engineering: Mechanical (MEM) is available. In addition, the interdisciplinary MS is offered in Ocean Engineering.

Master of Energy and Environmental Policy

The program leading to the Master of Energy and Environmental Policy (MEEP) is designed for students who wish to study energy and environmental policy issues. The program is administered in the College of Engineering.

Master of Fine Arts

The Department of Art and the Department of Theatre offer individually planned programs leading to the Master of Fine Arts (MFA). In art, a program with studio concentrations is offered to outstanding students preparing for professional careers in ceramics, printing, photography, printmaking, or sculpture. In theatre, exceptionally talented students pursue training that prepares them for a successful professional career in acting, stage management, or technical production.

Master of Instruction

The Master of Instruction (MI) professional degree program is designed to help teachers improve the quality of instruction in their classrooms. Individualized programs may include studies in curriculum development and implementation, teaching strategies, assessing student achievement, and other areas related to teaching. The degree is offered in the College of Education and Human Development.

Master of Marine Policy

The degree of Master of Marine Policy (MMP) is a professional degree designed for individuals seeking or continuing careers in government, business, or public interest organizations that are concerned about marine policy. It is conferred under the supervision of the College of Earth, Ocean and Environment utilizing the research facilities of the Center for the Study of Marine Policy.

Master of Music

The Master of Music (MM) degree program (with concentrations in composition, conducting, performance or teaching) is designed to prepare students for careers in the field of music either as performers or as music educators.

Master of Public Administration

The Master of Public Administration (MPA) professional degree program is designed for persons in or seeking to enter governmental service and related occupations. It is offered by the School of Urban Affairs and Public Policy.

Master of Science in Nursing

The Master of Science in Nursing (MSN) is designed to prepare clinical nurse specialists, nurse administrators, and family nurse practitioners.

Master of Teaching

The Master of Teaching is intended for students who wish to become certified in teaching at the secondary level (grades 6-12) in a single subject.

Professional Science Master's

The Professional Science Master's (PSM) degree is offered in Biotechnology in the Department of Biological Sciences and in Bioinformatics in the Department of Computer and Information Sciences.

Graduate Certificate Programs

Graduate Certification in Bioinformatics, Graduate Certificate in Biotechnology, Geographic Information Science (GIS) Certificate, Legal Studies Graduate Certificate Program, Socially Responsible and Sustainable Apparel Business Certificate, Computational Science and Engineering Certificate, Graduate Certificate in Early Language and Literacy, Graduate Certificate in Leadership in Early Childhood and Human Services, Graduate Certificate in Parent Education and Family Support, Certificate in Historic Preservation, Graduate Certificate in Statistics, Graduate Cognitive Science Certificate Program, Post-Master's Certificate in Nursing, Graduate Certificate in Disability Leadership.

Combined Undergraduate and Graduate Degree Programs (4+1) BA English/MA TESL, BA in Music/MBA/BA Sec Ed/MEd Sec ED, BS/MS Mathematics, BS/MS Applied Mathematics, BEE/MSECE, BCpE/MSECE, BA Linguistics/MA Linguistics & Cognitive Science, BS Human Services/MS Human Services Leadership Program, BS/MS Exercise Science, BS/MA Linguistics, BS/MS Accounting, BS/MMSE, BME/MEM, BCE/MCE, BENV/MCE, BS/MS Fashion Studies, BS/MS in Neuroscience.

Appendix 2. Graduate Program Actions by the Faculty Senate, 2006-2011

College	Program	Year	Action
Agriculture & Natural Resources	MS in Entomology	2006-2007	Name change to MS in Entomology and Applied Ecology & eliminate concentrations in entomology and applied ecology
Agriculture & Natural Resources	PhD in Entomology	2006-2007	Name change to PhD in Entomology & Wildlife Ecology Add concentrations in Entomology and Wildlife Ecology
Agriculture & Natural Resources	PhD in Entomology & Wildlife Ecology MS in Hospitality Information Management	2006-2007	
Business & Economics	MS in Health Promotion	2006-2007	Approved for permanent status Granted 3-yr extension in provisional status
Health Sciences		2006-2007	Approval of Graduate Certificate in Socially Responsible and Apparel Business
Arts & Sciences	Fashion Studies	2006-2007	Name change to PhD in Materials Science and Engineering
Engineering	PhD in Materials Science	2006-2007	
Earth, Ocean & Environment	MS Marine Studies; PhD Marine Studies	2006-2007	Change name of concentration to Marine Biosciences Approval of 4+1 combined BA in Music/MBA joint program
Arts & Sciences	Music	2006-2007	
Arts & Sciences	MA in Art	2006-2007	Disestablish MA in Art Revise requirements in the Mathematics Education concentration
Education & Human Development	M.ED. In Curriculum & Instruction	2006-2007	
Education & Human Development	M.ED. In Curriculum & Instruction	2006-2007	Revise requirements in the Secondary Mathematics Education concentration
Arts & Sciences	MA in Early American Culture	2006-2007	Name change to MA in American Material Culture
Engineering	MEM in Mechanical Engineering	2006-2007	Change in course requirements for the degree
Engineering	MSME in Mechanical Engineering	2006-2007	Change in course requirements for the degree
Engineering	PhD in Mechanical Engineering	2006-2007	Revise course requirements for the degree & Qualifying Examination Requirements
Arts & Sciences	MFA in Fine Arts	2006-2007	Change in course requirements for the degree
Education & Human Development	M.Ed. Educational Leadership	2006-2007	Change in course requirements for the degree in both concentrations (School Administration & Adult and

Post-Secondary Education
Administration)

Education & Human Development	M.Ed. Exceptional Children & Youth	2006-2007	Change in course requirements for the degree
Education & Human Development	Ed.D.	2006-2007	Change in course requirements in Administration & Policy concentration
Arts & Sciences	Linguistics	2006-2007	Approval of 4+1 combined BS/MA in Linguistics
Engineering/Business & Economics	MCHE/MBA dual degree	2006-2007	Approval of combined dual degree in Chemical Engineering and MBA
Engineering/Business & Economics	ME/MBA dual degree	2006-2007	Approval of combined dual degree in Mechanical Engineering and MBA
Engineering/Business & Economics	MSME/MBA dual degree	2006-2007	Approval of combined dual degree in Materials Science and MBA
Engineering/Business & Economics	ELEG/MBA dual degree	2006-2007	Approval of combined dual degree in Electrical Engineering and MBA
Engineering/Business & Economics	CE/MBA dual degree	2006-2007	Approval of combined dual degree in Civil Engineering and MBA
Agriculture & Natural Resources	MS in Bioresources Engineering	2007-2008	Approval of new degree in MS in Bioresources Engineering
	MS in Information Systems & Technology		
Business & Economics	Management	2007-2008	Approved for permanent status
Education & Human Development	M.Ed. In Reading	2007-2008	Changed credits to 33 for degree from 36
Education & Human Development	MS in Human Development & Family Studies	2007-2008	Disestablish concentration in Applied Family & Community Studies
Education & Human Development	MS in Human Development & Family Studies	2007-2008	Disestablish concentration in Early Childhood Development & Inclusive Education
Education & Human Development	MS in Human Development & Family Studies	2007-2008	Disestablish concentration in Risk and Disabilities
Education & Human Development	New Major	2007-2008	New major: M.Ed. In School Leadership
Education & Human Development	New Major	2007-2008	New major: Higher Education Administration
Education & Human Development	M.Ed. In Educational Leadership	2007-2008	Disestablish major in Educational Leadership
Education & Human Development	MA in School Psychology	2007-2008	Revise degree requirements

Education & Human Development	Ed.S. in School Psychology	2007-2008	Revise degree requirements Revise requirements for degree in Physics
Arts & Sciences	PhD in Physics MS in Exercise Science	2007-2008	Add concentration in Sports Medicine
Health Sciences	MS in Human Nutrition	2007-2008	Revise degree requirements Change degree requirements in Acting Concentration Change degree requirements in Stage Management Concentration
Arts & Sciences	MFA in Fine Arts	2007-2008	Change degree requirements in Technical Production Concentration
Arts & Sciences	MFA in Fine Arts	2007-2008	Change degree requirements in Technical Production Concentration
Arts & Sciences	MFA in Fine Arts	2007-2008	Change degree requirements in Technical Production Concentration
Engineering	MS and PhD in Electrical Engineering	2007-2008	Add new concentration in Biomedical Engineering Add new concentration in Computer Systems & Networking
Engineering	MS and PhD in Electrical Engineering	2007-2008	Add new concentration in Electromagnetics and Photonics
Engineering	MS and PhD in Electrical Engineering	2007-2008	Add new concentration in Materials and Devices
Engineering	MS and PhD in Electrical Engineering	2007-2008	Add new concentration in Signal Processing and Communications and Controls
Engineering	MS and PhD in Electrical Engineering	2007-2008	Approved new MS in Finance degree
Business & Economics	New Major	2007-2008	Approved new MS in Fashion Studies
Arts & Sciences	New Major	2007-2008	Approved university requirement for MFA degrees must be at least 60 credits
Arts & Sciences	Confirmed credits required for MFA	2007-2008	Approved name change to PhD in Geography
Earth, Ocean & Environment	PhD in Climatology	2007-2008	Added concentration in Land Surface Processes
Earth, Ocean & Environment	PhD in Geography	2007-2008	Added concentration in Climatology
Earth, Ocean & Environment	PhD in Geography	2007-2008	Change degree requirements in Performance concentration
Arts & Sciences	MM in Music	2007-2008	Added concentration in Agriculture Education
Education & Human Development	MI in Instruction	2007-2008	Changed degree requirements for the portfolio
Education & Human Development	MI in Instruction	2007-2008	Added concentration in Health Services Administration
Health Sciences	RN to MSN	2007-2008	Added new Concentration in Cell and Organ Systems
Arts & Sciences	MS and PhD in Biological Sciences	2007-2008	

Arts & Sciences	MS and PhD in Biological Sciences	2007-2008	Added new Concentration in Molecular Biology and Genetics
Arts & Sciences	MS and PhD in Biological Sciences	2007-2008	Added new Concentration in Ecology and Evolution
Arts & Sciences	MS and PhD in Biological Sciences	2007-2008	Added new Concentration in Biotechnology
Arts & Sciences	PhD in Biological Sciences	2007-2008	Added new Concentration in Chemistry-Biology Interface
Arts & Sciences	MS, PhD and PhD/MBA	2007-2008	Revised curriculum requirements and Program Policy Statement
Agriculture & Natural Resources	PhD Statistics	2007-2008	Disestablished the PhD in Statistics
Business & Economics	MS in Organizational Effectiveness, Development and Change	2008-2009	Approved for permanent status
Business & Economics	MS/MBA OEDC	2008-2009	Approved for permanent status
Business & Economics	MS/MBA in Accounting	2008-2009	Approved for permanent status
Education & Human Development	MS in Evaluation	2008-2009	Approved new program in MS in Evaluation
Engineering	Civil Engineering: MAS, MS, PhD	2008-2009	Added concentrations: Civil Infrastructure Systems, Coastal Eng., Environmental Eng., Geotechnical Eng., Structural Eng., Transportation Eng., and Water Resources Eng.
Education & Human Development	M. Ed. Exceptional Children & Youth	2008-2009	Changed degree requirements
Education & Human Development	M.A. in Teaching English as a Second Language	2008-2009	Changed degree requirements
Arts & Sciences	MA and PhD in Art History	2008-2009	Added Direct to the PhD program; revised MA curriculum
Education & Human Development	MI in Instruction	2008-2009	Revision of degree requirements
Arts & Sciences	M.S. in Disaster Science and Management	2008-2009	Approved new master's degree
Arts & Sciences	PhD in Disaster Science and Management	2008-2009	Approved new PhD degree
Education & Human Development	MA in Education	2008-2009	Approved new MA degree
Business & Economics	MS/MBA in Finance	2009-2010	Approved dual degree in Finance/MBA
Arts & Sciences	PhD English	2009-2010	Changed degree requirements
Arts & Sciences	MA English	2009-2010	Changed degree requirements
Earth, Ocean & Environment	MS and PhD in Marine Studies	2009-2010	Changed degree requirements

Health Sciences	MS in Exercise Science	2009-2010	Added concentration in Clinical Exercise Physiology
Arts & Sciences	New degree and major	2009-2010	PSM in Biotechnology
Agriculture & Natural Resources	PhD Entomology and Wildlife Ecology	2009-2010	Approved permanent status Approved new MS degree in Software Engineering
Engineering	New degree and major	2009-2010	
Arts & Sciences	MA in Liberal Students	2009-2010	Revision of degree requirements Revision of concentration in Composition
Arts & Sciences	Master of Music MA and PhD in International Relations & Political Science	2009-2010	Revision of degree requirements
Arts & Sciences	MS and PhD in Applied Mathematics	2009-2010	Revision of degree requirements
Arts & Sciences	MS and PhD in Mathematics	2009-2010	Revision of degree requirements Revision of requirements for Molecular Biology and Genetics Concentrations
Arts & Sciences	MS and PhD in Biological Sciences	2009-2010	Graduate certificate in Parent Education and Family Support
Education & Human Development	New Certificate Program	2009-2010	Graduate certificate in Early Language Literacy
Education & Human Development	New Certificate Program	2009-2010	Graduate certificate in Leadership in Early Childhood and Human Services
Engineering	New Combined degree	2009-2010	4+1 approved for BME/MEM in Mechanical Engineering Graduate Certificate in Bioinformatics: concentrations in Computational Sciences and in Life Sciences
Engineering	New Graduate Certificate Program	2009-2010	Graduate Certificate in Historic Preservation
Arts & Sciences	New Graduate Certificate Program	2009-2010	Doctor of Medicine (MD) + Master of Business Administration (MBA) dual degree program with TJU
Business & Economics	New Dual Degree Program	2009-2010	Revision of degree requirements
Business & Economics	MBA	2009-2010	Revision of degree requirements
Arts & Sciences	MPA	2009-2010	Revision and name change of Public and Non Profit Management Leadership to Human Services Leadership
Education & Human Development	MS in Human Development & Family Studies	2009-2010	
Education & Human Development	M.Ed. In Educational Technology	2009-2010	Revision of degree requirements
Arts & Sciences	New Graduate Certificate Program	2009-2010	Certificate Program in Biotechnology

Engineering	MS and PhD in Materials Science and Engineering	2009-2010	Revision of degree requirements
Business & Economics/Education	New joint degree program	2009-2010	MA and PhD in Economics Education
Health Sciences	New PhD degree	2009-2010	PhD in Applied Physiology Master of Science in Bioinformatics & Computational Biology with a Concentration in Computational Sciences and a Concentration in Life Sciences
Arts & Sciences	New MS degree	2009-2010	New degree: Professional Science Master's degree in Bioinformatics
Arts & Sciences	New PSM degree	2009-2010	
Education & Human Development	New MA degree	2009-2010	New degree: MA in Teaching Add concentration to MBA in Healthcare Policy
Business & Economics	MBA	2009-2010	
Business & Economics	MA, MS and PhD in Economics	2009-2010	Revision of degree requirements
Education & Human Development	New combined degree	2009-2010	4+1 approved for BS in Human Services /MS in Human Development & Family Studies
Health Sciences	New PhD degree	2009-2010	New PhD in Nursing Science 4+1 Option: BS Fashion Merchandising/MS Fashion Studies
Arts & Sciences	New combined degree	2009-2010	Bachelor's degree from any of the College of Engineering programs or a BS in Biological Sciences, Chemistry, or Physics or another approved BS program and a Master of Materials Science and Engineering leads to the concurrent awarding of the BS or an Engineering bachelor's degree and a Master of Material Science and Engineering
Engineering/Arts & Sciences	New combined degree	2009-2010	
Health Sciences	PhD in Applied Physiology	2010-2011	Revision of degree requirements
Health Sciences	MS in Human Nutrition	2010-2011	Revision of degree requirements
Arts & Sciences	Graduate Certificate in Fashion and Apparel Studies	2010-2011	Revision of degree requirements
Arts & Sciences	MS in Fashion and Apparel Studies	2010-2011	Name change and revision of degree requirements
Arts & Sciences	Master of Music	2010-2011	Revision of degree requirements in the Teaching concentration
Engineering	MEM, MS and PhD in	2010-2011	Revision of degree requirements

	Mechanical Engineering		in the Teaching concentration
Arts & Sciences	New degree and major	2010-2011	New MS in Neuroscience
Arts & Sciences	New concentration	2010-2011	New concentration in Curatorial Studies in PhD Art History
Arts & Sciences	New Graduate Certificate Program	2010-2011	New graduate certificate program in Cognitive Science
Arts & Sciences	MA in Urban Affairs and Public Policy	2010-2011	Revision of degree requirements; eliminate all concentrations in MA
Arts & Sciences	New combined degree	2010-2011	4 + 1 option in Neuroscience: BS/MS in Neuroscience
Arts & Sciences	New combined degree	2010-2011	4 + 1 in BS/MS Mathematical Sciences
Arts & Sciences	New combined degree	2010-2011	4 + 1 in BS/MS Applied Mathematics
Agriculture & Natural Resources	New PhD degree	2010-2011	PhD in Water Science and Policy
Agriculture & Natural Resources	New MS degree	2010-2011	MS in Water Science and Policy
Education & Human Development	New Graduate Certificate Program	2010-2011	Certificate in Disability Leadership
Health Sciences	MS in Exercise Science	2010-2011	Revision of degree requirements
Arts & Sciences	MA in Communication	2010-2011	Revision of degree requirements
Agriculture & Natural Resources	New Graduate Certificate Program	2010-2011	Graduate Certificate in Statistics
Health Sciences	RN to MSN	2010-2011	Add Nurse Practitioner concentration
Agriculture & Natural Resources	Change in name of PhD in Animal Sciences	2010-2011	Change name of PhD to Animal and Food Science
Arts & Sciences	Certificate in Computational Science and Engineering	2010-2011	Change certificate requirements
Earth, Ocean & Environment	Master of Marine Management	2010-2011	Disestablished the Master of Marine Management program
Health Sciences	MS in Health Promotion	2010-2011	Approved permanent status
Arts & Sciences	New combined degree	2010-2011	4+1 BA/MA in Linguistics and Cognitive Science
Health Sciences	Dietetics Certificate program with MS	2010-2011	Disestablish the option to do the Dietetics Certificate combined with the MS
Education & Human Development	Human Nutrition Counseling in Higher Education	2010-2011	Disestablish the MA program at the end of Spring 2012
Engineering	New combined degree	2010-2011	4+1 BEE/MSECE and \$+1 BCpE/MSECE in Electrical Engineering

Appendix 3. Ph.D. Completion/Attrition by Field, Citizenship, Race and Ethnicity

Area	Total Started Ph.D.	Earned Ph.D.		Withdrew		Left with master's		Pending	
		Count	% of total	Count	% of total	Count	% of total	Count	% of total
Physical & Life Sciences									
Intl									
INTL-NA									
1999	35	19	54.3%	8	22.9%	8	22.9%		0.0%
2002	37	26	70.3%	2	5.4%	8	21.6%	1	2.7%
2003	49	37	75.5%	5	10.2%	5	10.2%	2	4.1%
2004	40	28	70.0%	3	7.5%	5	12.5%	4	10.0%
US									
ASIAN									
1999	3	3	100.0%		0.0%		0.0%		0.0%
2002	4	3	75.0%		0.0%	1	25.0%		0.0%
2003	4	3	75.0%		0.0%	1	25.0%		0.0%
2004	5	2	40.0%	2	40.0%		0.0%	1	20.0%
BLACK									
1999	2	1	50.0%	1	50.0%		0.0%		0.0%
2002	2	1	50.0%		0.0%	1	50.0%		0.0%
2003	3	1	33.3%	2	66.7%		0.0%		0.0%
2004	4	3	75.0%	1	25.0%		0.0%		0.0%
HISPA									
1999	1		0.0%	1	100.0%		0.0%		0.0%
2002	2	1	50.0%	1	50.0%		0.0%		0.0%
2003	3	3	100.0%		0.0%		0.0%		0.0%
2004	1		0.0%	1	100.0%		0.0%		0.0%
WHITE									
1999	44	30	68.2%	9	20.5%	4	9.1%	1	2.3%
2002	47	34	72.3%	7	14.9%	5	10.6%	1	2.1%
2003	65	41	63.1%	8	12.3%	10	15.4%	6	9.2%
2004	40	29	72.5%	2	5.0%	3	7.5%	6	15.0%

Ph.D. Completion and Attrition for selected entry years									
Area	Total Started Ph.D.	Earned Ph.D.		Withdrew		Left with master's		Pending	
		Count	% of total	Count	% of total	Count	% of total	Count	% of total
Citizenship/Race/Ethnicity									
Mathematical Sciences & Engineering									
Intl									
INTL-NA									
1999	55	32	58.2%	11	20.0%	12	21.8%		0.0%
2002	85	48	56.5%	9	10.6%	25	29.4%	3	3.5%
2003	55	35	63.6%	7	12.7%	12	21.8%	1	1.8%
2004	50	25	50.0%	9	18.0%	12	24.0%	4	8.0%
US									
AMIND									
2003	1	1	100.0%		0.0%		0.0%		0.0%
ASIAN									
1999	5	5	100.0%		0.0%		0.0%		0.0%
2002	3	1	33.3%		0.0%	1	33.3%	1	33.3%
2003	2	2	100.0%		0.0%		0.0%		0.0%
2004	3	3	100.0%		0.0%		0.0%		0.0%
BLACK									
1999	3	2	66.7%		0.0%	1	33.3%		0.0%
2002	1		0.0%	1	100.0%		0.0%		0.0%
2003	3		0.0%	3	100.0%		0.0%		0.0%
2004	1		0.0%		0.0%	1	100.0%		0.0%
HISPA									
2002	4	2	50.0%	1	25.0%	1	25.0%		0.0%
2004	1	1	100.0%		0.0%		0.0%		0.0%
PACIF									
2002	1	1	100.0%		0.0%		0.0%		0.0%
WHITE									
1999	21	15	71.4%	2	9.5%	4	19.0%		0.0%
2002	41	22	53.7%	7	17.1%	11	26.8%	1	2.4%
2003	41	23	56.1%	6	14.6%	9	22.0%	3	7.3%
2004	51	16	31.4%	10	19.6%	17	33.3%	8	15.7%

Ph.D. Completion and Attrition for selected entry years									
Area	Total Started Ph.D.	Earned Ph.D.		Withdrew		Left with master's		Pending	
		Count	% of total	Count	% of total	Count	% of total	Count	% of total
Citizenship/Race/Ethnicity									
Humanities									
Intl									
INTL-NA									
1999	1		0.0%		0.0%	1	100.0%		0.0%
US									
AMIND									
2002	1	1	100.0%		0.0%		0.0%		0.0%
ASIAN									
2003	1	1	100.0%		0.0%		0.0%		0.0%
BLACK									
1999	1		0.0%	1	100.0%		0.0%		0.0%
2002	1		0.0%		0.0%	1	100.0%		0.0%
HISPA									
1999	1		0.0%		0.0%		0.0%	1	100.0%
2002	1		0.0%		0.0%		0.0%	1	100.0%
WHITE									
1999	12	7	58.3%	2	16.7%	2	16.7%	1	8.3%
2002	19	7	36.8%	4	21.1%	5	26.3%	3	15.8%
2003	13	5	38.5%	2	15.4%	2	15.4%	4	30.8%
2004	18	7	38.9%	2	11.1%	4	22.2%	5	27.8%

Ph.D. Completion and Attrition for selected entry years									
Area	Total Started Ph.D.	Earned Ph.D.		Withdrew		Left with master's		Pending	
		Count	% of total	Count	% of total	Count	% of total	Count	% of total
Citizenship/Race/Ethnicity									
Social Sciences									
Intl									
INTL-NA									
1999	13	6	46.2%	6	46.2%	1	7.7%		0.0%
2002	12	6	50.0%	1	8.3%	4	33.3%	1	8.3%
2003	11	7	63.6%	3	27.3%	1	9.1%		0.0%
2004	13	4	30.8%	2	15.4%	2	15.4%	5	38.5%
US									
AMIND									
1999	1	1	100.0%		0.0%		0.0%		0.0%
2002	1	1	100.0%		0.0%		0.0%		0.0%
ASIAN									
1999	1	1	100.0%		0.0%		0.0%		0.0%
2002	3	1	33.3%	1	33.3%		0.0%	1	33.3%
2003	2	1	50.0%	1	50.0%		0.0%		0.0%
2004	1		0.0%		0.0%		0.0%	1	100.0%
BLACK									
1999	8	4	50.0%	3	37.5%	1	12.5%		0.0%
2002	4	2	50.0%		0.0%	2	50.0%		0.0%
2003	3	2	66.7%		0.0%		0.0%	1	33.3%
2004	3	2	66.7%		0.0%	1	33.3%		0.0%
HISPA									
1999	1	1	100.0%		0.0%		0.0%		0.0%
2002	1		0.0%		0.0%	1	100.0%		0.0%
2003	1		0.0%		0.0%		0.0%	1	100.0%
2004	1		0.0%	1	100.0%		0.0%		0.0%
UNKNOWN/NSPEC									
1999	1	1	100.0%		0.0%		0.0%		0.0%
WHITE									
1999	23	21	91.3%	1	4.3%	1	4.3%		0.0%
2002	21	12	57.1%	6	28.6%	2	9.5%	1	4.8%
2003	23	10	43.5%	5	21.7%	7	30.4%	1	4.3%
2004	17	10	58.8%	2	11.8%	1	5.9%	4	23.5%

Appendix 4. Degrees Awarded by Degree Type, Citizenship, Race and Ethnicity, 2006-2010

Degrees Awarded by Degree Type, Citizenship, and Race/Ethnicity 2006-2010															
Degree Type	Degree Calendar Year	US										US Total	Intl Total	Grand Total	
		AMIND	ASIAN	BLACK	HISPA	MULTI_ ETHNIC	PACIF	UNKNOWN/ NSPEC	WHITE						
Certificate	2006				2	1						6	9		9
	2007				1						7	11	19		19
	2008				1						17	10	28		28
	2009		2								13	9	24		24
	2010	1	1			2					15	17	36	2	38
Doctoral	2006	2	4	5	5	4						70	85	59	144
	2007		6	5	5	3						132	146	75	221
	2008	1	8	7	7	5	1					133	155	57	212
	2009		10	12	12	5					1	149	177	82	259
	2010		9	8	8	4	1				2	119	143	91	234
Master's	2006	2	14	37	37	13						364	435	111	546
	2007	3	24	43	43	20	1				6	498	595	173	768
	2008		31	54	54	13	1				3	454	556	163	719
	2009	2	28	39	39	13					22	463	567	154	721
	2010	3	29	40	40	23	1				12	460	568	170	738
Specialist	2006					1						4	5		5
	2007				1							6	7		7
	2008		2									8	10		10
	2009					1						6	7		7
	2010				1	2						5	8	1	9
Grand Total		14	168	256	110	1	4	103	2924	3580	1138	4718			

Degrees Awarded to US Students by Race/Ethnicity 2006-2010																
Degree Type	Degree Calendar Year	US										US Total				
		AMIND	ASIAN	BLACK	HISPA	MULTI_ETHNIC	PACIF	UNKNOWN/NSPEC	WHITE							
		Count	% of US	Count	% of US	Count	% of US	Count	% of US	Count	% of US	Count	% of US			
Certificate	2006		0.00%	2	22.22%	1	11.11%		0.00%		0.00%	7	36.84%	6	66.67%	9
	2007		0.00%	1	5.26%		0.00%		0.00%		0.00%		0.00%	11	57.89%	19
	2008		0.00%	1	3.57%		0.00%		0.00%		0.00%	17	60.71%	10	35.71%	28
	2009		0.00%	2	8.33%		0.00%		0.00%		0.00%	13	54.17%	9	37.50%	24
	2010	1	2.78%	1	2.78%		0.00%	2	5.56%		0.00%	15	41.67%	17	47.22%	36
Doctoral	2006	2	2.35%	4	4.71%	5	5.88%	4	4.71%		0.00%		0.00%	70	82.35%	85
	2007		0.00%	6	4.11%	5	3.42%	3	2.05%		0.00%		0.00%	132	90.41%	146
	2008	1	0.65%	8	5.16%	7	4.52%	5	3.23%		0.00%	1	0.65%	133	85.81%	155
	2009		0.00%	10	5.65%	12	6.78%	5	2.82%		0.00%	1	0.56%	149	84.18%	177
	2010		0.00%	9	6.25%	8	5.59%	4	2.80%	1	0.70%	2	1.40%	119	83.22%	143
Master's	2006	2	0.46%	14	3.22%	37	8.51%	13	2.95%		0.00%	5	1.15%	364	83.68%	435
	2007	3	0.50%	24	4.03%	43	7.23%	20	3.36%		0.00%	6	1.01%	498	83.70%	595
	2008		0.00%	31	5.58%	54	9.71%	13	2.34%		0.00%	3	0.54%	454	81.65%	556
	2009	2	0.35%	28	4.94%	39	6.88%	13	2.29%		0.00%	22	3.88%	463	81.66%	567
	2010	3	0.53%	29	5.11%	40	7.04%	23	4.05%		0.00%	12	2.11%	460	80.99%	568
Specialist	2006		0.00%		0.00%		0.00%	1	20.00%		0.00%		0.00%	4	80.00%	5
	2007		0.00%		0.00%	1	14.29%		0.00%		0.00%		0.00%	6	85.71%	7
	2008		0.00%	2	20.00%		0.00%		0.00%		0.00%		0.00%	8	80.00%	10
	2009		0.00%		0.00%		0.00%	1	14.29%		0.00%		0.00%	6	85.71%	7
	2010		0.00%		0.00%	1	12.50%	2	25.00%		0.00%		0.00%	5	62.50%	8
Grand Total		14	0.39%	168	4.69%	256	7.15%	110	3.07%	1	0.03%	103	2.88%	2524	81.68%	3580

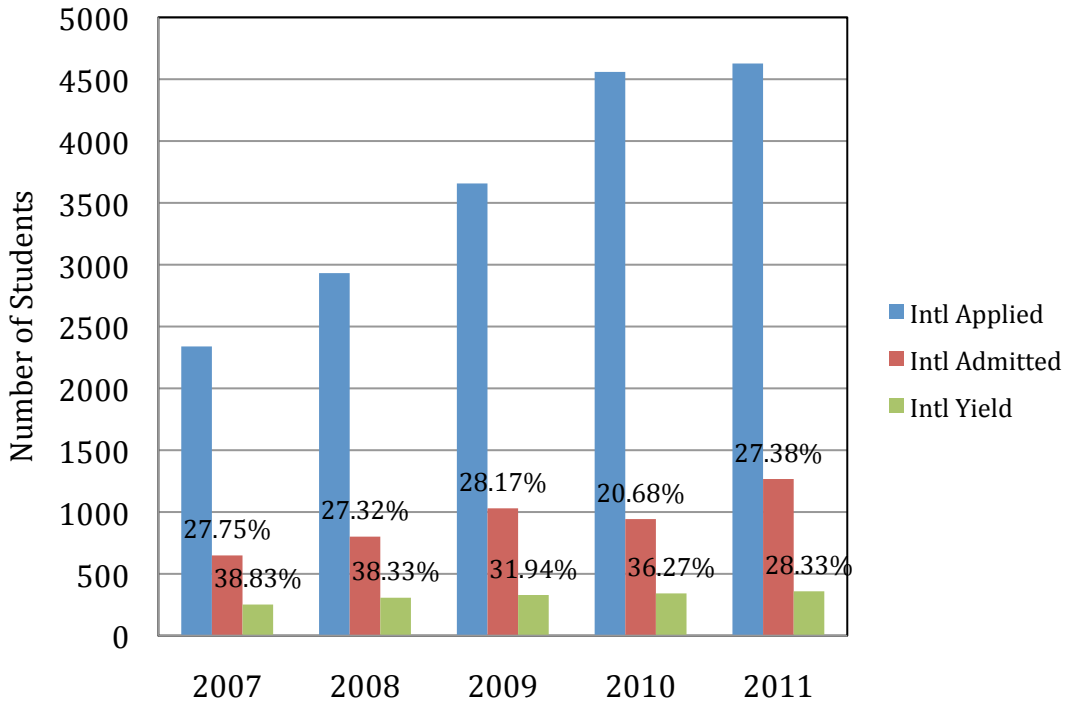
Appendix 5. Comprehensive Enrollment Data, 2007-2011

US		AMIND	ASIAN	BLACK	HISPA	MULTI ETHNIC	PACIF	Total Minority	UNKNOWN	WHITE							
Term	College	Count	% of total Count	% of US Count	% of US Count	% of US Count	% of US Count	Count	% of US Count	Count	% of US Count						
Fall 2011	AG	86	51.81%	0.00%	3	3.49%	3	3.49%	3	3.49%	3	3.49%					
	AS	864	75.59%	2	0.23%	33	3.82%	37	4.28%	1	1.15%	69	80.23%				
	BE	359	60.64%	0.00%	47	13.09%	29	8.08%	10	2.79%	8	0.92%	687	75.51%			
	EG	408	49.10%	0.00%	39	9.56%	24	5.88%	15	3.68%	5	1.25%	259	31.04%			
	EH	355	90.79%	1	0.28%	11	3.10%	32	9.01%	15	4.23%	3	0.85%	289	35.98%		
	HN	355	94.67%	2	0.56%	17	4.79%	37	10.42%	7	1.97%	3	0.85%	243	30.45%		
	MIS	140	88.61%	1	0.71%	5	3.57%	2	1.43%	6	4.29%	1	0.71%	119	85.00%		
Fall 2011 Total		2567	70.21%	6	0.23%	158	6.16%	93	6.97%	22	0.86%	3	0.12%	1976	76.98%		
Fall 2010	AG	86	52.44%	0.00%	7	8.14%	2	2.33%	3	3.49%	0.00%	0.00%	5	5.81%	69	80.23%	
	AS	876	75.52%	4	0.45%	31	3.54%	51	5.82%	32	3.69%	5	0.57%	125	14.27%		
	BE	436	66.97%	1	0.23%	56	12.84%	36	8.20%	12	2.75%	4	0.92%	111	25.46%		
	EG	368	48.23%	2	0.54%	26	7.07%	16	4.39%	9	2.45%	2	0.54%	55	14.95%		
	EH	426	93.83%	1	0.23%	11	2.58%	41	9.62%	20	4.69%	1	0.23%	74	17.37%		
	HN	350	95.89%	3	0.85%	12	3.43%	33	9.43%	10	2.86%	0.00%	0.00%	58	16.57%		
	MIS	138	89.61%	0.00%	5	3.62%	2	1.45%	3	2.17%	0.00%	0.00%	10	7.25%	28	8.00%	
Fall 2010 Total		2680	72.22%	11	0.41%	148	5.52%	181	6.75%	89	3.37%	12	0.45%	445	16.60%		
Fall 2009	AG	99	54.10%	0.00%	6	6.06%	2	2.02%	2	2.02%	0.00%	0.00%	4	4.04%	87	87.88%	
	AS	919	78.15%	7	0.76%	29	3.16%	65	7.07%	36	3.92%	0.00%	0.00%	141	15.34%		
	BE	439	70.35%	1	0.23%	49	11.16%	36	8.20%	14	3.19%	0.00%	0.00%	102	23.23%		
	EG	345	47.33%	3	0.87%	23	6.67%	13	3.77%	10	2.90%	0.00%	0.00%	49	14.20%		
	EH	453	93.60%	0.00%	7	1.55%	42	9.27%	18	3.97%	0.00%	0.00%	1	0.22%	68	15.01%	
	HN	325	95.03%	2	0.62%	14	4.31%	25	7.69%	8	2.46%	0.00%	0.00%	49	15.08%		
	MIS	131	85.62%	1	0.76%	5	3.82%	2	1.53%	1	0.76%	0.00%	0.00%	9	6.87%		
Fall 2009 Total		2711	73.45%	14	0.52%	133	4.91%	183	6.75%	89	3.28%	7	0.26%	426	15.71%		
Fall 2008	AG	102	56.67%	1	0.98%	5	4.90%	0.00%	0.00%	0.00%	0.00%	0.00%	3	2.94%	93	91.18%	
	AS	913	77.70%	3	0.33%	33	3.61%	62	6.79%	33	3.61%	0.00%	0.00%	133	14.57%		
	BE	417	74.07%	3	0.72%	55	13.19%	33	7.91%	10	2.40%	0.00%	0.00%	102	24.46%		
	EG	320	47.20%	2	0.63%	16	5.00%	8	2.50%	8	2.50%	0.00%	0.00%	34	10.63%		
	EH	419	92.70%	0.00%	5	1.19%	43	10.29%	15	3.58%	0.00%	0.00%	1	0.24%	64	15.27%	
	HN	288	98.29%	2	0.69%	14	4.86%	21	7.29%	9	3.13%	0.00%	0.00%	46	15.97%		
	MIS	130	83.87%	1	0.77%	1	0.77%	0.00%	0.00%	1	0.77%	0.00%	0.00%	3	2.31%		
Fall 2008 Total		2589	74.06%	12	0.46%	179	4.98%	167	6.45%	76	2.94%	4	0.15%	388	14.99%		
Fall 2007	AG	96	56.80%	0.00%	4	4.17%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10	10.42%	82	85.42%	
	AS	870	76.86%	1	0.11%	23	2.64%	62	7.13%	25	2.87%	0.00%	0.00%	112	12.87%		
	BE	405	73.77%	2	0.49%	49	12.10%	35	8.64%	11	2.72%	0.00%	0.00%	98	24.20%		
	EG	316	47.31%	2	0.63%	18	5.70%	5	1.58%	7	2.22%	0.00%	0.00%	33	10.44%		
	EH	424	93.15%	1	0.24%	8	1.89%	35	8.23%	16	3.77%	0.00%	0.00%	61	14.39%		
	HN	314	98.74%	1	0.32%	14	4.45%	21	6.69%	6	1.91%	0.00%	0.00%	43	13.69%		
	MIS	129	82.65%	0.00%	3	2.33%	1	0.78%	1	0.78%	0.00%	0.00%	5	3.88%			
Fall 2007 Total		2554	74.09%	7	0.27%	119	4.66%	159	6.23%	66	2.58%	5	0.20%	356	13.94%		
														129	5.05%	2069	81.01%

Appendix 6. International Applications, Offers and Acceptances, 2007-2011

	Int'l Applications	Int'l Admitted	Int'l Accepted
2007	2339	649	252
2008	2932	801	307
2009	3657	1030	329
2010	4559	943	342
2011	4627	1267	359

International Applications, Offers and Acceptances, 2007-2011

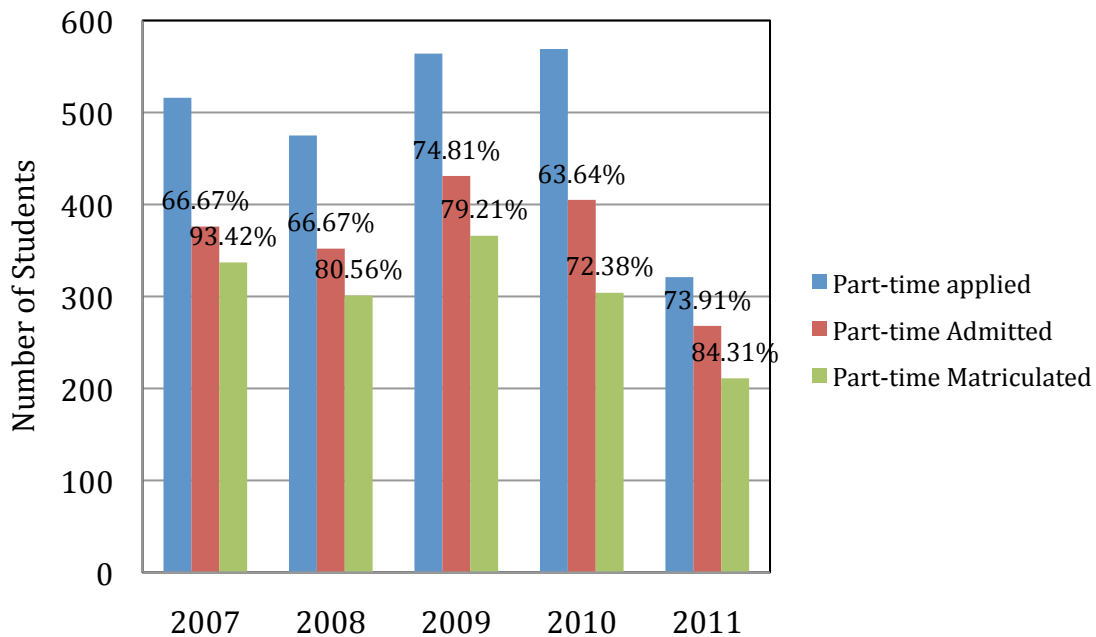


Percentages indicate percentage of offers made to those who applied, i.e. admitted/applied (over red bar) and percentage of acceptances of those who were admitted, i.e. matriculated/admitted (over green bar).

Appendix 7. Part-Time Applications, Offers and Acceptances, 2007-2011

	Part-Time Applications	Part-Time Admitted	Part-Time Accepted
2007	516	376	337
2008	475	352	301
2009	564	431	366
2010	569	405	304
2011	321	268	211

Part-Time Applications, Offers and Acceptances, 2007-2011

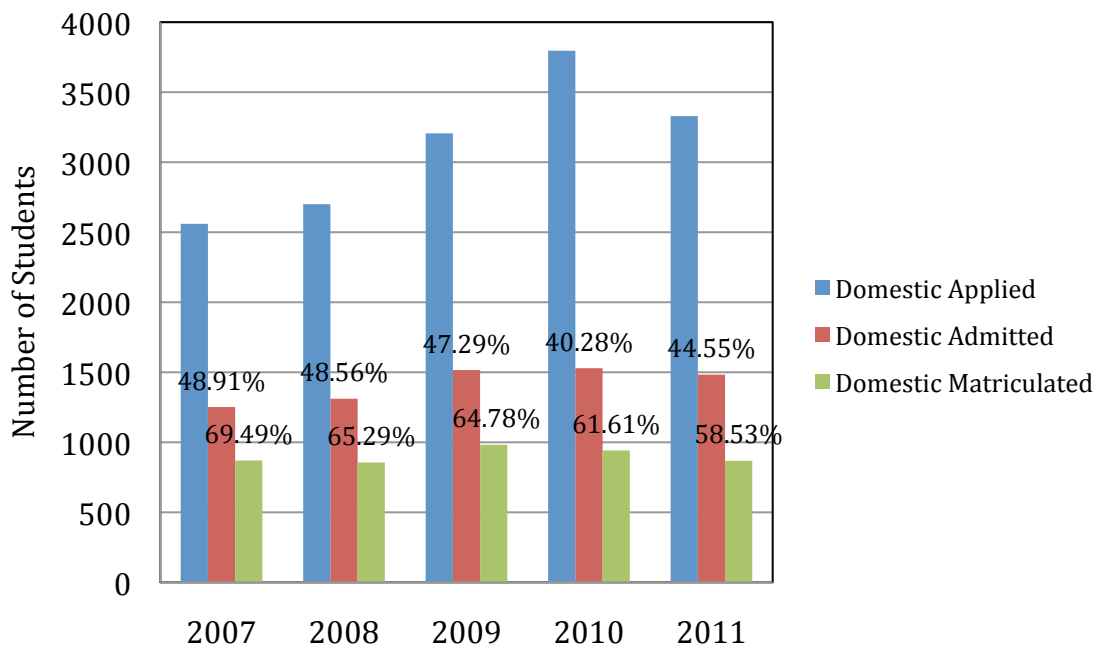


Percentages indicate percentage of offers made to those who applied, i.e. admitted/applied (over red bar) and percentage of acceptances of those who were admitted, i.e. matriculated/admitted (over green bar).

Appendix 8. U.S. Citizens/Permanent Residents Applications, Offers and Acceptances, 2007-2011

	US Citizen/Permanent Resident Applied	US Citizen/Permanent Resident Admitted	US Citizen/Permanent Resident Matriculated
2007	2560	1252	870
2008	2700	1311	856
2009	3206	1516	982
2010	3796	1529	942
2011	3329	1483	868

U.S. Citizens/Permanent Residents Applications, Offers and Acceptances, 2007-2011

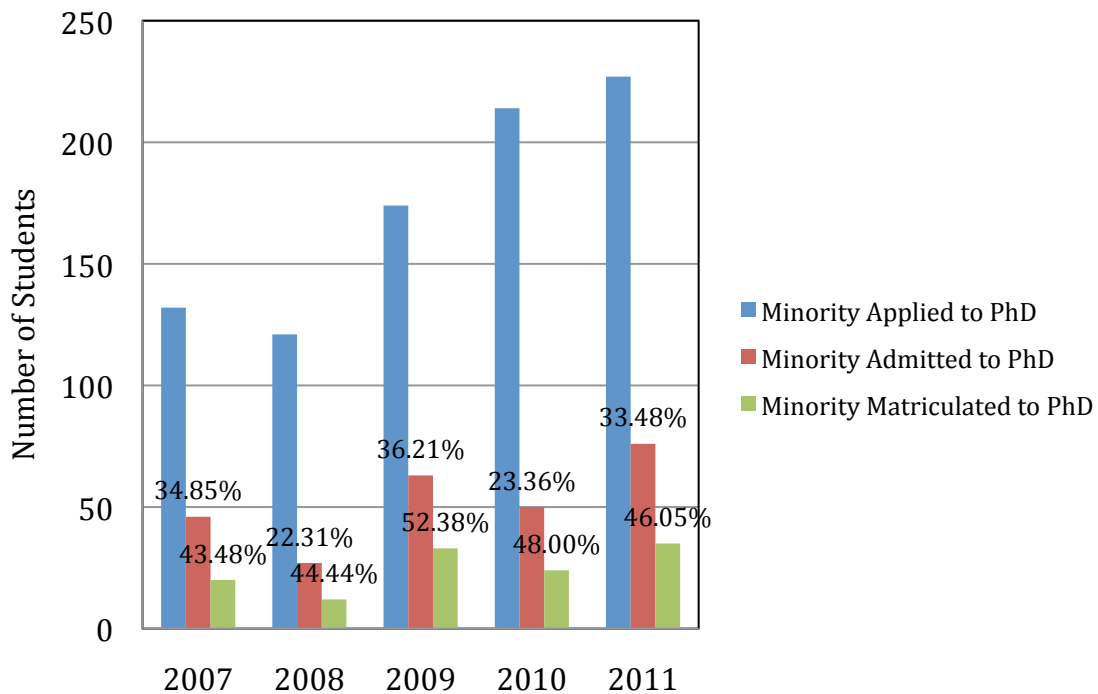


Percentages indicate percentage of offers made to those who applied, i.e. admitted/applied (over red bar) and percentage of acceptances of those who were admitted, i.e. matriculated/admitted (over green bar).

Appendix 9. Racial/Ethnic Minority Ph.D. Applications, Offers and Acceptances, 2007-2011

	Racial/Ethnic Minority Applications	Racial/Ethnic Minority Admitted	Racial/Ethnic Minority Accepted
2007	132	46	20
2008	121	27	12
2009	174	63	33
2010	214	50	24
2011	227	76	35

**Racial/Ethnic Minority Ph.D.
Applications, Offers and Acceptances,
2007-2011**

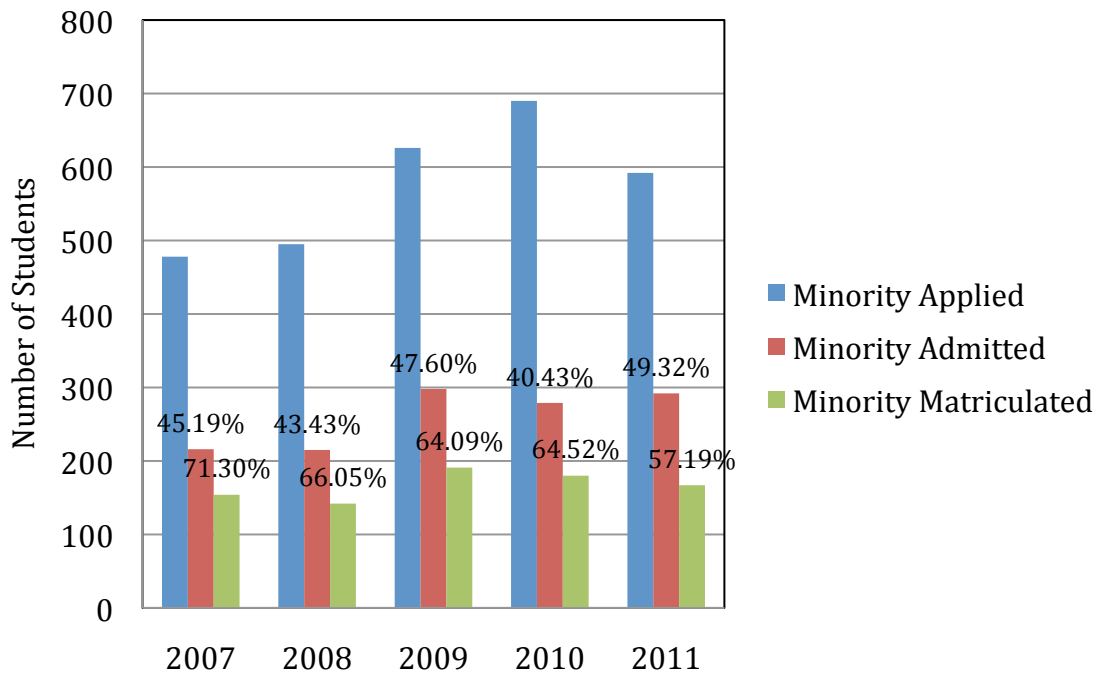


Percentages indicate percentage of offers made to those who applied, i.e. admitted/applied (over red bar) and percentage of acceptances of those who were admitted, i.e. matriculated/admitted (over green bar).

Appendix 10. Racial/Ethnic Minority Applications, Offers and Acceptances, 2007-2011

	Racial/Ethnic Minority Applications	Racial/Ethnic Minority Admitted	Racial/Ethnic Minority Accepted
2007	478	216	154
2008	495	215	142
2009	626	298	191
2010	690	279	180
2011	592	292	167

Minority Applications, Offers, Acceptances, 2007-2011

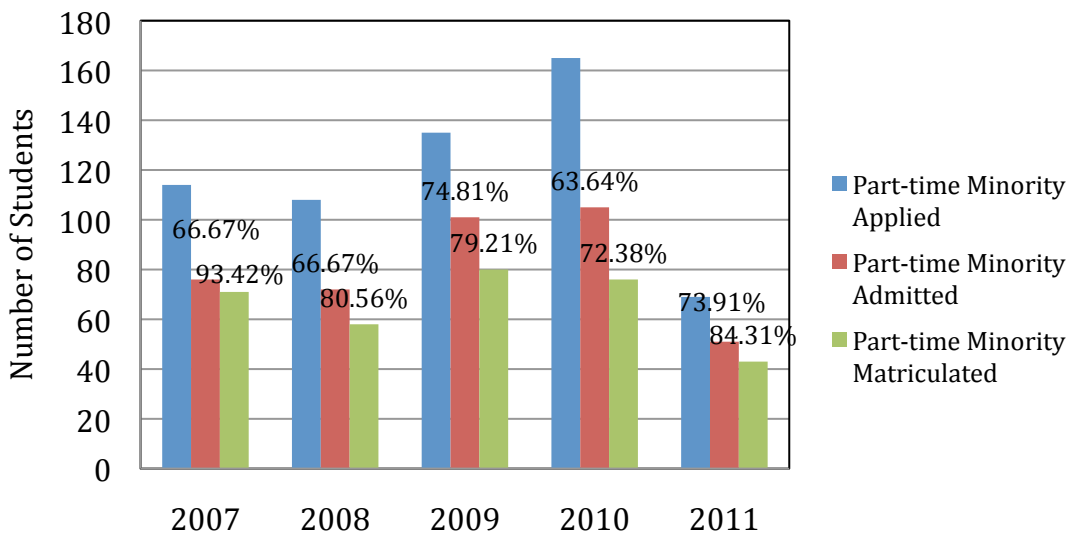


Percentages indicate percentage of offers made to those who applied, i.e. admitted/applied (over red bar) and percentage of acceptances of those who were admitted, i.e. matriculated/admitted (over green bar).

Appendix 11. Part-Time Racial/Ethnic Minority Applications, Offers and Acceptances, 2007-2011

	Racial/Ethnic Minority Applications	Racial/Ethnic Minority Admitted	Racial/Ethnic Minority Accepted
2007	114	76	71
2008	108	72	58
2009	135	101	80
2010	165	105	76
2011	69	51	43

Part-Time Racial/Ethnic Minority Applications, Offers and Acceptances, 2007-2011

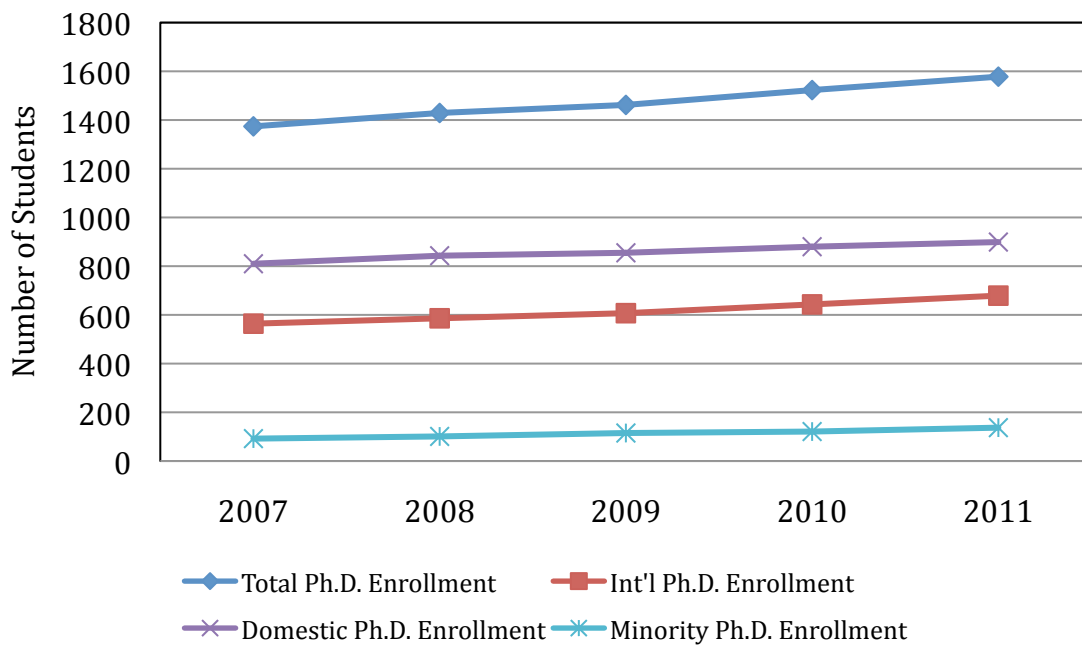


Percentages indicate percentage of offers made to those who applied, i.e. admitted/applied (over red bar) and percentage of acceptances of those who were admitted, i.e. matriculated/admitted (over green bar).

Appendix 12. Ph.D. Enrollments, 2007-2011

	2007	2008	2009	2010	2011
Total PhD	1374	1429	1462	1523	1578
International PhD	564	586	607	643	679
US Citizen/Permanent Resident PhD	810	843	855	880	899
Racial/Ethnic Minority PhD	92	101	115	121	137

PhD Enrollment 2007-2011



Appendix 13. Doctoral Degrees Award to Racial/Ethnic Minorities, 2006-2010

University of Delaware	Racial/Ethnic Minorities	Total U.S. Citizen/Permanent Resident	Racial/Ethnic Minorities Percentage of Total
2006	21	136	15.44%
2007	18	144	12.50%
2008	18	150	12.00%
2009	25	174	14.37%
2010	25	154	16.23%

Source: IPEDS

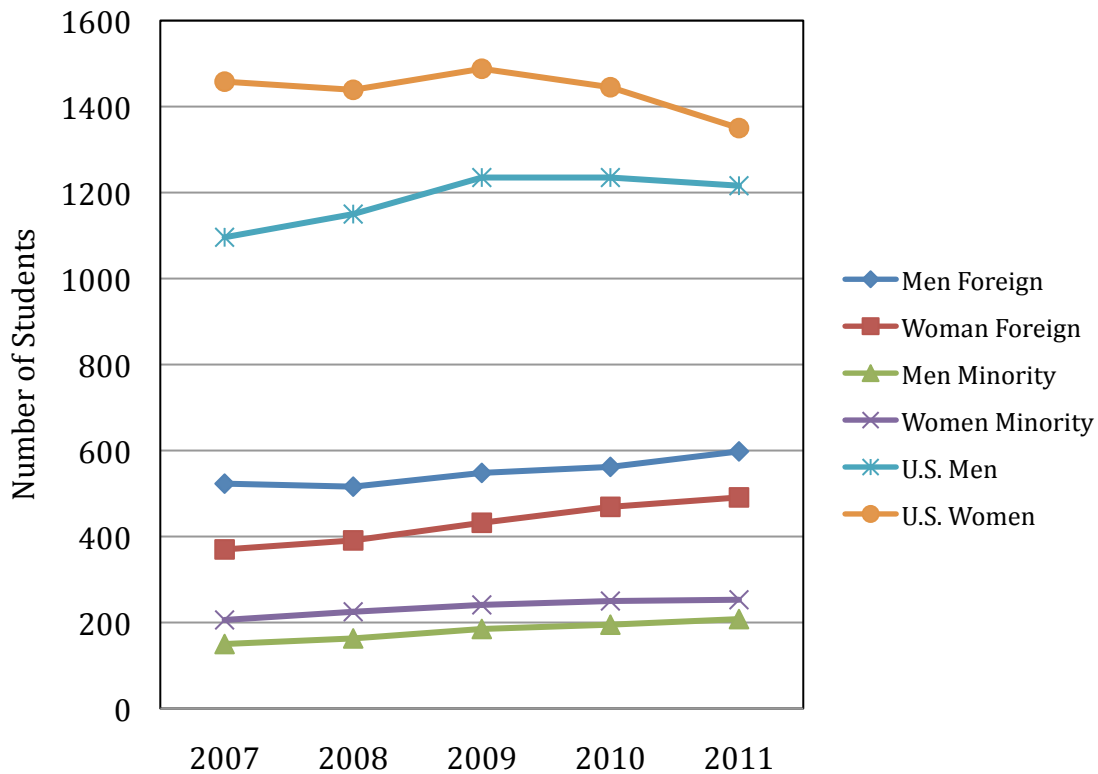
Appendix 14. Recruitment Fairs and Outreach, 2011

-
Outreach (all fields, within driving range)
Penn State McNair Conference
UMBC McNair Conference
Cheyney University Grad Fair
Graduate Opportunities Conference (Fattah) (Phil, PA)
UM- College Park McNair Conference
Lincoln U Grad Fair
UD Grad Expo (minority resource table)
Co-sponsor UD McNair Speaker 2011
All fields: Atlanta Consortium (Spellman, Morehouse, Clark) (Atlanta, GA)
All fields: CA Forum for Diversity in Graduate Education (San Jose, CA)
Life Sciences: ABRCMS (St. Louis, MO)
Engineering: AMP Research Symposium (possibly at UD)
Social Sciences, Education: Graduate Degrees for the Public Good (idealist.org)
Arts & Humanities: See CA Forum for Diversity
Prospect Data/Communication
National Name Exchange download 2011-2012
National McNair List download 2011-2012

Appendix 15. Enrollment by Citizenship and Total Race/Ethnicity, 2007-2011

	2007	2008	2009	2010	2011
Men Intl	523	516	548	562	598
Woman Intl	370	391	432	469	491
Men Racial/Ethnic Minority	150	163	185	195	208
Women Racial/Ethnic Minority	206	225	241	250	253
U.S./Perm. Res. Men	1096	1150	1235	1235	1216
U.S./Perm. Res. Women	1458	1439	1488	1445	1350
Total Racial/Ethnic Minority	356	388	426	445	461
Total US/Perm. Res.	2554	2589	2723	2680	2566
Total Enrollment	3447	3496	3691	3711	3656

Enrollment by Citizenship and Total Race/Ethnicity, 2007-2011



Appendix 16. International Enrollment by Country of Origin, 2007-2011

Doctoral enrollment	2007	2008	2009	2010	2011	Master's enrollment	2007	2008	2009	2010	2011
U.S. Citizen/ Perm. Res.	1016	1050	1078	1089	1108	U.S. Citizen/ Perm. Res.	1402	1402	1486	1419	1296
China	208	223	248	292	326	China	81	112	158	194	241
India	100	98	94	71	71	India	82	91	91	74	59
Korea, Republic of	33	40	38	35	41	Korea, Republic of	9	11	8	14	14
Turkey	32	35	34	42	38	Turkey	10	17	23	25	11
Taiwan	15	16	18	24	24	Taiwan	10	9	9	8	7
Iran (Islamic Republic Of)	11	12	16	18	21	Ghana	2	3	5	3	5
Colombia	8	10	15	15	17	Saudi Arabia		1	4	4	5
Greece	2	3	4	5	9	Germany	4	6	2	4	4
Pakistan	13	12	11	10	7	Colombia	4	1	1	1	4
Germany	8	9	9	8	7	Indonesia	4	2	1	2	4
Thailand	4	5	8	9	7	Spain	1	1		1	3
Nepal	2	4	4	4	7	Nigeria		3	4	4	3
France	7	6	4	6	6	Iran (Islamic Republic Of)	2	3	5	3	2
Brazil	7	8	7	7	6	Cote D'Ivoire			1	1	2
Japan	8	4	3	5	5	Thailand	5	6	5		1
Canada	5	4	5	5	5	Nepal	5	5	2		1
Mexico	3	2	2	3	5	Pakistan	5	2	2	1	1
Bangladesh	6	6	6	5	4	Kenya	2	2	3	1	1
Russian Federation	5	4	4	3	4	Azerbaijan	1	1			1
Ghana	5	4	5	4	4	Senegal	1				1
Jamaica	1	3	2	2	4	Ireland	1	1	1	1	1
Nigeria	1		1	2	4	Ukraine	1			1	1
Saudi Arabia	1	2	4	5	4	Israel	1	1			1
Viet Nam	3	2	1	3	3	Ecuador	1	1	1	2	1
Peru	3	4	4	3	3	Jordan	1	2	2	1	1
United Kingdom	2	2	2	3	3	Egypt	1				1
Trinidad and Tobago	1	1	2	2	3	Kazakhstan	1			1	1
Italy	1	1	1	1	3	South Africa	1				1
Zimbabwe				2	3	United Kingdom	1			1	1
Indonesia	4	3	3	2	2	Uzbekistan					1
Sri Lanka	4	3	3	1	2	Cambodia				1	1
Spain	3	2	2	2	2	Kuwait					1

Doctoral enrollment	2007	2008	2009	2010	2011
Kazakhstan	2	2	2	2	2
Kenya	2	2	1	1	2
Netherlands	2	2	2	1	2
Jordan	1	1	1	3	2
Egypt	1	2	1	2	2
Togo	1	1		1	2
Chile		1	1	1	2
Argentina				1	2
Romania	5	4	5	4	1
Bulgaria	5	4	2	1	1
Morocco	2	2	1	1	1
Cyprus	2	1	1	1	1
Ireland	2	2	2	2	1
Belarus	2	1		1	1
Malaysia	2	1		1	1
Mauritius	1	1	1	1	1
Cambodia	1	1	1	1	1
Bolivia	1	1	1	1	1
Switzerland	1	1	1	1	1
Poland	1	2	1	1	1
Costa Rica	1	1	1	1	1
Uruguay		1	1	1	1
Oman		1	1	1	1
Myanmar					1
Sudan		1	1	1	1
Albania					1
Philippines			1	1	1
Belize			1	1	1
Tunisia					1
Tajikistan			1	1	1
Belgium			1	1	1
#N/A	5	4	1		
Latvia	3	3	3	3	
Venezuela	2	2	2	1	
Israel	2	2	2	2	

Master's enrollment	2007	2008	2009	2010	2011
Burkina Faso		1	1		1
Canada			2	3	1
Jamaica			1	2	1
Congo, The Democratic Republic					1
Greece		1	4	2	1
Sierra Leone					1
Iraq				1	1
Denmark					1
Libyan Arab Jamahiriya			1	1	1
Bosnia and Herzegovina	20				
France	7	4	2	2	
Bulgaria	4	2			
Morocco	3		1	1	
Philippines	3	1			
Romania	3	1	1		
Russian Federation	3	2	2	1	
Peru	2	2	1	1	
Malaysia	2		1	2	
Brazil	2	1	1	1	
Viet Nam	2	2	1		
Japan	2				
Lebanon	2	2	1	1	
Venezuela	1	1	1		
Poland	1	1	1	1	
Guyana	1				
Trinidad and Tobago	1	1			
Hong Kong	1				
Paraguay	1				
Albania	1				
Bangladesh	1				
Georgia	1	1			
Costa Rica	1	1	1		
Afghanistan	1				
Sri Lanka	1				
Maldives	1				

Doctoral enrollment	2007	2008	2009	2010	2011
Eritrea	2	1	1	1	
Lebanon	2	2	3	2	
Malawi	1	1	1		
Georgia	1	1			
Antigua and Barbuda	1	1	1	1	
Australia	1	2	2		
Tanzania, United Republic of	1	1			
Turkmenistan	1	1	1	1	
Azerbaijan	1				
Uzbekistan	1				
South Africa	1	1			
Iceland	1				
Portugal		1	1	1	
Barbados		1	1	1	
Total Doctoral enrollment	1583	1638	1689	1737	1797

Master's enrollment	2007	2008	2009	2010	2011
Tanzania, United Republic of	1	1			
Martinique	1				
Barbados	1				
Mexico	1				
Myanmar	1	1			
Zambia	1	1			
Dominica	1	2	1		
Netherlands	1				
Tunisia			1	1	
Belarus			1	1	
Ethiopia		1	1		
Madagascar			1	1	
Zimbabwe				1	
Palestinian Territory, Occupie			1	1	
Australia				1	
Panama			1	1	
#N/A			1		
Italy			2		
Total Master's enrollment	1715	1713	1847	1793	1687

Certificate enrollment	2007	2008	2009	2010	2011
U.S. Citizen / Perm.Res.	47	43	45	68	67
Mexico					1
India			1	1	
Total cert. enrollment	47	43	46	69	68

Non-Degree enrollment	2007	2008	2009	2010	2011
U.S. Citizen / Perm.Res.	89	91	102	104	95
China		2		2	2
Taiwan			2	2	2
Spain	1	1		2	1
France	1	1	1		1
Panama					1
India		1	1	1	1
#N/A	6				

Non-Degree enrollment	2007	2008	2009	2010	2011
Guinea	1	1			
Poland	1	1			
Romania	1				
Germany	1				
Finland	1				
Ghana			1		
Senegal				1	
Greece			1		
Malaysia		1			
Kazakhstan			1		
Total ND enrollment	102	99	109	112	103

Appendix 17. Ph.D. Enrollments in STEM Fields by College and Citizenship

Total Enrollments

College	2007	2008	2009	2010	2011
CANR	46	50	49	52	50
CAS	323	342	338	339	349
CoE	433	440	458	502	533
CHS	4	6	34	40	47
CEOE	78	83	75	62	64
Total	884	921	954	995	1043

U.S. Citizen/Permanent Resident Enrollments

College	2007	2008	2009	2010	2011
CANR	23	25	22	26	25
CAS	174	185	181	176	178
CoE	180	184	185	194	210
CHS	4	6	24	32	33
CEOE	56	59	54	50	50
Total	437	459	466	478	496

International Enrollments

College	2007	2008	2009	2010	2011
CANR	23	25	27	26	25
CAS	149	157	157	163	171
CoE	253	256	273	308	323
CHS	0	0	10	8	14
CEOE	22	24	21	12	14
Total	447	462	488	517	547

Appendix 18. Doctoral Enrollments by College and Citizenship.

Total Enrollments

College	2007	2008	2009	2010	2011
CANR	46	50	49	52	50
CAS	671	695	688	702	711
CBE	39	43	38	48	46
CoE	463	478	496	535	571
CEHD	74	76	73	72	75
CHS	4	6	34	40	51
CEOE	78	83	84	74	75
Total	1375	1431	1462	1523	1579

U.S. Citizen/Permanent Resident Enrollments

College	2007	2008	2009	2010	2011
CANR	23	25	22	26	25
CAS	465	482	473	475	479
CBE	17	17	14	16	14
CoE	191	200	201	210	224
CEHD	55	56	58	59	60
CHS	4	6	24	32	37
CEOE	56	59	63	62	61
Total	811	845	855	880	900

International Enrollments

College	2007	2008	2009	2010	2011
CANR	23	25	27	26	25
CAS	206	213	215	227	232
CBE	22	26	24	32	32
CoE	272	278	295	325	347
CEHD	19	20	15	13	15
CHS			10	8	14
CEOE	22	24	21	12	14
Total	564	586	607	643	679

Appendix 19. STEM Enrollments in the College of Arts & Sciences by Citizenship and Program

Total Enrollments

Program	2007	2008	2009	2010	2011
APMT-MS	6	5	4	4	2
APMT-PHD	17	17	24	28	30
BIOT-CERT				2	
BIOT-CERT-ND					2
BIOT-PSM				2	4
BIS-MS	19	24	28	34	40
BIS-PHD	50	53	60	56	56
BMSC-MS-AS	6	7			
BMSC-PH-AS	15	27	2	3	
CHBC-MA	1	2	4	3	3
CHBC-MS	5	3	1	1	3
CHBC-PHD	144	151	157	153	157
MATH-MS	2	2	3	4	2
MATH-PHD	23	26	22	23	29
PS-MIN-G					1
PS-MS	4	4	2	5	7
PS-PHD	74	68	73	76	76
Total	366	389	380	394	412

U.S. Citizen/Permanent Resident Enrollments

Program	2007	2008	2009	2010	2011
APMT-MS	3	3	1	1	2
APMT-PHD	11	7	8	10	9
BIOT-CERT				1	
BIOT-CERT-ND					2
BIOT-PSM				2	3
BIS-MS	12	14	19	24	28
BIS-PHD	33	32	40	36	37
BMSC-MS-AS	4	5			
BMSC-PH-AS	9	19	2	3	
CHBC-MA	1	2	4	3	3
CHBC-MS	3	2	1	1	3
CHBC-PHD	91	93	96	91	91
MATH-MS	1	2	2	3	2

Program	2007	2008	2009	2010	2011
MATH-PHD	15	15	12	12	16
PS-MIN-G					1
PS-MS		1		2	4
PS-PHD	15	19	23	24	24
Total	198	214	208	213	225

International Enrollments

Program	2007	2008	2009	2010	2011
APMT-MS	3	2	3	3	
APMT-PHD	6	10	16	18	21
BIOT-CERT				1	
BIOT-PSM					1
BIS-MS	7	10	9	10	12
BIS-PHD	17	21	20	20	19
BMSC-MS-AS	2	2			
BMSC-PH-AS	6	8			
CHBC-MS	2	1			
CHBC-PHD	53	58	61	62	66
MATH-MS	1		1	1	
MATH-PHD	8	11	10	11	13
PS-MS	4	3	2	3	3
PS-PHD	59	49	50	52	52
Total	168	175	172	181	187

Appendix 20. Master's Enrollments by College

Total Enrollments

College	2007	2008	2009	2010	2011
CANR	122	129	134	112	116
CAS	455	469	477	448	424
CBE	444	451	524	537	494
CoE	175	177	194	187	212
CEHD	249	246	270	251	184
CNS	192	169	179	184	177
CEOE	78	72	69	74	80
Total	1715	1713	1847	1793	1687

U.S. Citizen/Permanent Resident Enrollments

College	2007	2008	2009	2010	2011
CANR	72	76	77	60	61
CAS	402	426	438	395	379
CBE	325	333	363	355	294
CoE	102	97	109	119	139
CEHD	240	235	258	240	171
CNS	188	164	173	178	174
CEOE	73	71	68	72	78
Total	1402	1402	1486	1419	1296

International Enrollments

College	2007	2008	2009	2010	2011
CANR	50	53	57	52	55
CAS	53	43	39	53	45
CBE	119	118	161	182	200
CoE	73	80	85	68	73
CEHD	9	11	12	11	13
CNS	4	5	6	6	3
CEOE	5	1	1	2	2
Total	313	311	361	374	391

Appendix 21. Curriculum Vitae (in alphabetical order)

Louise Bank
803 W. Boxborough Drive
Wilmington, DE 19810
H: 302-475-6348
W: 610-558-5613
E-mail: BankL@Udel.edu

RELEVANT EXPERIENCE

University of Delaware, Newark, DE, 08/07 – present

Assistant Director, Office of Graduate and Professional Education

Under limited oversight of Vice Provost, manage all aspects of graduate admissions including International academic credential verification, establishing and ensuring conditions of admission are articulated and met, providing timely responses to applicants, recommenders and University faculty and staff in a distributed environment via both coordinated and ad hoc communications strategies. Function as System Administrator using a centralized application system, maintain and troubleshoot system interface with PeopleSoft/Oracle, liaison with the Office of International Students and Scholars, and more recently, coordinate recruitment efforts of underrepresented minority students.

Neumann University, Aston, PA, 1/02 – 08/07

Associate Director, Graduate and Adult Admissions

Promotion from Assistant Director, with added responsibilities as follows: Founded the college's first Office of Graduate and Adult Admissions; initiated the Graduate and Adult Student Support Services committee as well as the Online Administrative Support Committee; currently refine exported applicant/enrollment reports via Datatel (similar to PeopleSoft) for each graduate department on a bi-weekly basis; submission of annual report; creation of long range graduate planning for use in college's Strategic Plan; responsible for all new location launches; liaison to Graduate Council providing advice on academic policy; continue as backup DSO for the college.

Assistant Director, Graduate and Adult Admissions, and International Student Administrator

Under limited direction of the Vice President for Enrollment and Student Services; daily admissions officer for graduate degrees and certificate programs as well as adult undergraduate degree programs; primary contact with all Graduate Program Coordinators and designees; encourage/ensure registration and independently investigate and resolve barriers to same; explain financial aid and payment inquiries; plan and execute all recruitment and communication management activities for inquiries and applicants; produce reports on enrollments and projections; attend recruitment events; executed and later assisted with graduate student orientation each spring and fall; member of various interview committees. International / foreign student responsibilities included overseeing initial visit from FBI during initial SEVIS approval; DSO and sole SEVIS interface; review all documents (Affidavit of Support, etc) for proper execution; coordinate transcript review with World Education Service; generate initial I-20 form; meet with international students each semester; serve as main source of information for the college on all international student visa issues.

University of Pennsylvania, Philadelphia PA, 10/95 – 12/02

Program Manager. The Wharton School of Business, University of Pennsylvania

Promotion from Coordinator. Managed select open enrollment programs including content and scheduling; assessed faculty payment and coordinated with finance office; monitored and solicited customer feedback during programs; maintained communications across all levels of program delivery; oversaw all logistical operations for a select portfolio of open enrollment programs at different stages of delivery; produced break even analysis for select programs.

Coordinator. The Wharton School of Business, University of Pennsylvania

Planned, organized and executed logistics for a portfolio of open enrollment Wharton Executive Education programs. Worked successfully with Wharton faculty, external faculty, Aramark Services, external vendors, and all program participants. Provided pre-reading information and responded to all participant inquiries before, during and after program. Assisted faculty in the presentation of materials, while clearly communicating deadlines. Organized and reconciled all financial and budgetary information associated with logistical execution. Worked effectively on multiple programs at different stages of delivery.

Academic Assistant. Graduate School of Education, University of Pennsylvania

Management responsibilities included coordination of faculty searches and promotions; assisting faculty and students with academic procedures; database management and production coordination for eight grants totaling over \$1 million; maintaining complex calendar including conferences, briefings, lectures, advisory, student and faculty meetings; processing expenses; tracking billing; general liaison with internal and external business offices; creating presentation materials; and coordinating academic courses and events.

EDUCATION

Present Master of Liberal Arts. Focus: Graduate Education, University of Pennsylvania, ABT.
 1991 – 1992 Courses in Managing Organizational Behavior, Non-Profit Development, Administration and Marketing. Member of Graduate Student Association, New York University
 1991 Bachelor of Arts in Music, University of Delaware

PROFESSIONAL DEVELOPMENT

7/09 **International Credential Evaluation Seminar**, American Association of Collegiate Registrars and Admissions Officers (AACRAO)
 7/04 **Communication Skills Seminar**, Neumann University
 7/03 **Service Excellence**, Neumann University
 5/03 **Seven Habits of High Effective People**, Franklin Covey
 3/02 **Techniques for Healthy Relationships**, Neumann University
 7/01 **Best Practices for the Multi-Project Manager**, American Management Association.
 3/01 **Streetsmart Financial Basics for Nonprofit Managers**, American Management Association and Human Resources Learning and Education, University of Pennsylvania (1.2 ceus.)
 3/01 **The Disney Approach to Customer Loyalty**, Disney Institute, Orlando, FL.
 5/99 **Professional Development Program**, Human Resources Learning and Education, University of Pennsylvania.

MEMBERSHIPS

2009 – present National Name Exchange (NNE), Board Secretary
 2009 – present American Association of Collegiate Registrars and Admissions Officers (AACRAO), Member
 2003 – present National Association of Graduate Admissions Professionals (NAGAP), Member
 2003 – present National Association of Foreign Student Advisers (NAFSA), Member

William N. Barnett
Program Support Specialist
Office of Graduate and Professional Education
University of Delaware
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bbarnett@udel.edu
302-831-8486

FUNCTIONS AND RESPONSIBILITIES

Compile student and applicant demographic, academic, and funding data from multiple databases for internal and external reporting. Develop, publish, and maintain Cognos reports against an Oracle data warehouse for graduate student enrollment management (approximately 3,600 students per semester). Produce *ad hoc* reports as requested. Specify and test updates to automated graduate student funding processes. Assign and communicate login credentials to incoming students; troubleshoot login errors.

PREVIOUS POSITIONS HELD

Cornell University, Ithaca, NY **2006-2010**

Data Specialist, Graduate School

Compiled student and applicant demographic, academic, and funding data from multiple databases for internal and external reporting. Developed, published, and maintained Hyperion Brio reports against an Oracle data warehouse for graduate student enrollment management (approximately 5,000 students per semester). Produced *ad hoc* reports as requested.

University of Maryland, College Park, MD **2004-2006**

Associate Director, University Relations Information Services (2005-2006); Senior Systems Analyst (2004-2005)

Provided support services for Sungard Advance software. Supported gift entry, tracking, acknowledgment, and accounting. Managed Alumni Association membership and dues data. Created standard and *ad hoc* reports from the Advance database for mailing lists, gift pipeline, trend analysis, prospecting, financial reporting, grant applications, endowment statements, and comparative reporting.

Johns Hopkins University, Bloomberg School of Public Health, Baltimore, MD **1999-2004**

Senior Systems Analyst (2002-2004); Systems Analyst (2002); Database Administrator (2001-2002)

Served as School's technical lead in the University's Internet Student Information System (ISIS) initiative to implement Sungard Matrix student services system. Served on teams formed to implement each module (Financial Aid, Admissions, Registration, Student Accounts) as well as committees for code definition, business process analysis, data migration, application testing, and reporting. Implemented and administered SQL Server-based Exeter Student Marketing System 4.2 (SMS) for admissions.

Assistant Registrar (1999-2001)

Supervised registration/records staff (five FTE) for enrollment of approximately 1600 students per quarter. Coordinated student registration at main campus and satellite locations. Oversaw data management and distribution of class and grade rosters, grades, and announcements. Served as secretary for Committee on Academic Standards.

Johns Hopkins University, Peabody Conservatory, Baltimore, MD **1994-1999**

Assistant Registrar (1997-1999); Registration Systems Specialist (1994-97)

Maintained records in the University Student Information System (USIS). Submitted batch jobs to run against USIS via JCL; produced reports from USIS data via FOCUS queries. Assisted the Registrar in managing the student registration process (500-600 students per semester). Maintained and performed admissions and registration system interfaces.

EDUCATION

M.B.A., University of Maryland, College Park, MD - Marketing Concentration **1990**

B.A., Johns Hopkins University, Baltimore, MD - Humanities Area Studies Major **1986**

JAMES KEVIN BROOMALL

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EDUCATION

D.Ed., Pennsylvania State University, 1984 (Higher Education, Educational Theory and Policy)
Area of Concentration: Adult and Continuing Education

M.Ed., North Carolina State University, 1977 (Adult and Community College Education,
Political Science)

BA, *cum laude*, University of Delaware, 1975 (Political Science, English)

PROFESSIONAL EXPERIENCE

2001-present University of Delaware: Assistant Provost, Division of Professional and
Continuing Studies.

1988-2001 University of Delaware: Director of Professional and Noncredit Programs,
Division of Continuing Education.

1989-present University of Delaware: Affiliated Assistant Professor, School of Education.

1986-1988 Allegany College of Maryland: Dean of Continuing Education.

1984-1985 University of Nevada, Reno: Director of Academic Programs and Assistant Dean,
Division of Continuing Education/Summer Session.

1982-1984 University of Nevada, Reno: Director of Regional Programs, Independent Study,
and Professional Development, Division of Continuing Education.

1980-1982 Pennsylvania State University: Research Assistant, Center for the Study of Higher
Education.

1977-1980 University of North Carolina, Chapel Hill: Program Coordinator, Office of
Independent Study by Extension, Division of Extension and Continuing
Education.

RELATED PROFESSIONAL ACTIVITY

Editor, *Journal of Continuing Higher Education*.

Middle States Association Reviewer, 2005-present.

American Council on Education Reviewer, 2000-2005.

The College Board Office of Adult Learning Services, 1993-1997.

ACADEMIC HONORS

Co-recipient, Philip Frandsen Award for Outstanding Publication in Continuing Higher
Education, 1993.

Phi Beta Kappa.

Phi Kappa Phi.

Pi Sigma Alpha.

Mary J. Martin, Ed.D.

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EDUCATION

Ed.D., University of Delaware, 2006 (Educational Leadership, Administration & Policy)

M.S., Indiana State University, 1970 (Business Education)

B.A., Valparaiso University, 1963 (Business Education and English)

PROFESSIONAL EXPERIENCE

2009-present University of Delaware: Assistant Provost for Graduate and Professional Education

2000--2009 University of Delaware: Assistant Provost for Graduate Studies.

1996 -2000 University of Delaware: Associate Director for Graduate Academic Affairs

1988- 1996 University of Delaware: Administrator for Graduate Student Academic Affairs; Instructor in Accounting

1983-1988 Valparaiso University: Assistant Dean in the College of Business Administration and Assistant Professor of Accounting

1981-1983 Valparaiso University: Assistant to the Dean of the College of Business Administration and Instructor of Accounting

1973-1981 Valparaiso University: Full-Time Instructor of Accounting

1964-1976 Portage High School; Valparaiso High School; Boone Grove High School; Teacher of Adult Education for State of Indiana

1964-1968 Portage High School: High School Teacher of Business and English

1963-1964 Dyer Central High School: High School Teacher of Business

RELATED PROFESSIONAL ACTIVITY

President, 2008-2009 Northeastern Association of Graduate Schools

Board of Directors, 2002-2010 Northeastern Association of Graduate Schools

HONORS

Best Presenter Award at the Chicago SISU conference

Best Practice Award for the Exemplary Model of Administrative Leadership from the American Association of University Administrators

University of Delaware President's Innovation Award

University of Delaware Professional Staff Merit Recognition Award

The First Outstanding College of Business Administration Teacher-Valparaiso University

Charles G. Riordan, Professor and Vice Provost for Graduate and Professional Education

Professional Positions

2010-	Vice Provost for Graduate and Professional Education
2002-2007	Chair, Department of Chemistry and Biochemistry
2001	Professor
1999-2002	Director of Graduate Studies and Assistant Chair
1997-2001	Associate Professor of Chemistry and Biochemistry, University of Delaware
1994-1997	Graduate Faculty, Department of Biochemistry, Kansas State University
1993-1997	Assistant Professor of Chemistry, Kansas State University
1990-1992	Research Associate: University of Chicago under the direction of Dr. Jack Halpern.

Education

1990	Ph. D., Chemistry, Texas A&M University.
1986	B. A., Chemistry, College of the Holy Cross, Worcester, MA.

Honors and Awards

2010	Fellow of the Royal Society of Chemistry
2008	Outstanding Doctoral Graduate Advising and Mentoring Award, University of Delaware
2006	Lecturer, Chemistry Promotion Center of the National Science Council of Taiwan
2005	Inducted into Academy of Former Students, College of Science, Texas A&M Univ.
2003	Karcher Lecturer, University of Oklahoma
1994-99	National Science Foundation Young Investigator (NYI)
1990	Sharon Dabney Memorial Graduate Research Award sponsored by Phi Lambda Upsilon, Texas A&M University
1990	Department of Chemistry Inorganic Research Award sponsored by the American Chemical Society, Texas A&M University
1986	American Institute of Chemists Award. College of the Holy Cross

Scholarly Interests

The Riordan research program focuses on frontier mechanistic problems in bioinorganic chemistry that may be probed through reactivity and kinetic studies. Research at this interface requires the tools of both synthetic and physical inorganic chemistry. We are taking a bioinspired approach to explore small molecule activation via low valent, late metal transition metal complexes. Reductive activation of dioxygen (as well as sulfur and selenium) by nickel(I) complexes represents our current focus. This program has been funded primarily by the NIH and the NSF. Current funding provided by the NSF.

Publications

More than sixty peer-reviewed publications.

Editorial Board and Agency Service (recent)

2008-2011	Editorial Advisory Board, <i>Journal of Biological Inorganic Chemistry</i>
2007-	Editorial Board, <i>Current Chemical Biology</i>
2007-2012	Editorial Board, <i>Dalton Transactions</i>
2006-2010	NIH Macromolecular Structure and Function-A Study Section, Member, Chair
2005	NIH Macromolecular Structure and Function-A Study Section, <i>Ad Hoc</i> Member
2004	Guest Editor, <i>Journal of Biological Inorganic Chemistry</i> , Special Issue on ACS Enzyme

Society Memberships

American Chemical Society, American Institute of Chemists, Phi Lambda Upsilon, Sigma Xi, American Association for the Advancement of Science, Society of Biological Inorganic Chemistry, Royal Society of Chemistry

John E. Sawyer Ph.D., Brief CV

Associate Provost for Professional Education Office: 302-831-4377
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Professor & Graduate Program Director Office: 302-831-1787
Department of Business Administration FAX: 302-831-4196
Alfred Lerner College of Business & Economics sawyerj@udel.edu
University of Delaware
Newark, DE 19716

Education

University of Illinois, Urbana-Champaign
Industrial and Organizational Psychology; Minor: Quantitative Methods, Ph.D. 1987
Industrial and Organizational Psychology, A.M. 1985
California State University, Long Beach
Psychology, B.A. 1977

Academic Employment

University of Delaware, Office of Graduate and Professional Education
Associate Provost for Professional Education (2009-present), Faculty Fellow (2008-2009)
University of Delaware, Alfred Lerner College of Business & Economics
Professor of Management (1/1991 - present: promoted to Associate 1995, to Professor 2003)
Chair, Department of Business Administration (9/2001 - 8/2006)
Management Area Head (9/1998 - 9/2001)
Texas A & M University, Department of Psychology
Assistant Professor, Industrial & Organizational Psychology (9/1987 - 8/1991)

Sample Publications

- Griffith, T.L., & Sawyer, J.E. (2010). Multilevel Knowledge and Team Performance. *Journal of Organizational Behavior*, 31, 1003-1031. DOI: 10.1002/job.660
- Griffith, T.L., & Sawyer, J.E. (2010). Research Team Design and Management for Centralized R&D. *IEEE Transactions in Engineering Management*, 57(2), 211-224.
- Cadiz, D.M., Sawyer, J.E., & Griffith, T.L. (2009). Developing and Validating Field Measurement Scales for Absorptive Capacity and Experienced Community of Practice. *Educational and Psychological Measurement*, 69(6), 1035-1058.
- Sawyer, J. E., Houlette, M. A., & Yeagley, E. L. (2006). Decision performance and diversity structure: Comparing faultlines in convergent, crosscut, and racially homogeneous groups. *Organizational Behavior and Human Decision Processes*, 99(1), 1-15.
- Griffith, T.L., Sawyer, J.E., & Neale, M.A. (2003) Virtualness and knowledge in teams: Managing the love triangle of organizations, individuals and information technology. *MIS Quarterly*, 27(2), 265-287.
- Sawyer, J. E., Latham, W. R., Pritchard, R. D., & Bennett, W. R., Jr. (1999). Analysis of work group productivity in an applied setting: Application of a time series panel design. *Personnel Psychology*, 52, 927-967.

Woodman, R. W., Sawyer, J. E., & Griffin, R. W. (1993). Toward a theory of organizational creativity. *Academy of Management Review*, 18, 293-321.

Reprinted in C. L. Cooper (Ed.). *Fundamentals of Organizational Behavior*, Volume 3, 2002. London: Sage Publications Ltd.

Sawyer, J. E. (1992). Goal and process clarity: Specification of multiple constructs of role ambiguity and a structural equation model of their antecedents and consequences. *Journal of Applied Psychology*, 77, 130-142.

Sawyer, J. E., (1991). Hypothesis sampling, construction, or adjustment: How are inferences about nonlinear monotonic contingencies developed? *Organizational Behavior and Human Decision Processes*, 49, 124-150.

Sawyer, J. E., (1990). Effects of risk and ambiguity on judgments of contingency relations and behavioral resource allocation decisions. *Organizational Behavior and Human Decision Processes*, 45, 85-110.

Synergistic Activities

- Leading campus wide efforts to develop Professional Science Master's degree programs
- Developed and directs the Master of Science in Organizational Effectiveness, Development and Change program, University of Delaware.
- Created the Multidisciplinary Biotechnology course for the IGERT Funded Multidisciplinary Graduate Program in Biotechnology.
- Developed the New Venture Creation concentration in the UD MBA Program
- Developed first dual degree PhD/MBA program in Biological Sciences

Grants, Fellowships & Awards

- W91 WAW-080C-0031. "Enhancing Employee Dedication and Retention: The Contribution of Perceived Organizational Support." Army Research Institute contract with Robert Eisenberger and Louis Buffardi, February 15, 2008 – February 14, 2011. \$595, 501.
- NSF SES-0422772, "Collaborative Research: Knowledge, Innovation, and Virtual Work in Science and Engineering Organizations," July, 2004 - June, 2007.
- NSF 02-145, Integrative Graduate Education and Research Traineeship (IGERT) Program "Multidisciplinary Graduate Program in Biotechnology." 2003-2007
- Academy of Management Innovation Award, August, 2001

Editorial Boards

- Editorial Board, *IEEE Transactions on Engineering Management*, June 1, 2010-July 1, 2013.
- Editorial Board, *Organizational Behavior and Human Decision Processes*, July 1, 2007-June 30, 2013
- Editorial Board, *Journal of Behavioral Decision Making*, 2004-present
- Editorial Board, *Journal of Applied Behavioral Science*, 2008 - present
- Editorial Board, *Journal of Management*, 1999-2002.
- Guest Editorial Board, *Academy of Management Journal*, Special Research Forum: *Change and Development Journeys into a Pluralistic World*, 1999
- Guest Editorial Board, *Academy of Management Journal*, Special Research Forum: *Innovation and Organizations*, 1996.