BAYLOR UNIVERSITY

Graduate School

www.baylor.edu/graduate

NOVEMBER 2018

THE *ILLUMINATE* GOAL:
A PREEMINENT CHRISTIAN RESEARCH UNIVERSITY

ANNUAL REPORT

IN THIS ISSUE:

An Introductory Note from Dean Lyon: *Illuminate, R1 and the Graduate School*

"We begin another year with new leadership…" serves as the introductory sentence for this and the Graduate School's previous four reports. And, with a successful search for a new provost, we can begin the 2019 report in the same way. Yet, despite the changes in Baylor's leadership, one thing has remained constant: Our progress continues to reflect the vision developed sixteen years ago in *Baylor 2012 (B 2012)* and the goals of six years ago set in *Pro Futuris (PF).* That progress is tied to the labors of our faculty and staff, who have remained consistent in their efforts, and to the enduring power of envisioning Baylor as "ranking among the finest univesities in the nation" (*B 2012*, p. 3.4) and "as a research university with a strong Christian commitment" (*PF,* p.13). Our people and our vision make it possible.

Still, despite our continued progress during all this turnover, leadership still matters. An important example is President Livingstone's explicit and continual invocation of R1 status as a goal for Baylor. Our new strategic plan, *Illuminate (I)*, calls for Baylor to "realize our full potential as a preeminent Christian research university" (*I,* p. 5) and raises the visibility of our graduate and research aspirations to unprecedented levels. Thus, it is appropriate to devote the introduction of this year's Report to research measures like R1 and its implications for Baylor and the Graduate School.

Why R1?

Baylor 2012, Pro Futuris, and *Illuminate* all call for Baylor to influence the world from the perspective of a Christian research university. *Baylor 2012* (p. 3.4) further asserts that "such influence requires a depth of scholarly excellence and a volume of scholarly output that is found only in schools with first-rate graduate programs." Baylor must become excellent, not just by our own proclamations, but by the standards of the Academy, by attaining the most widely accepted measure of "first-rate": R1 (Very High Research) status in the Carnegie Classification of universities. This is why *Pro Futuris* calls for Baylor to "increase PhD production" and "raise…externally funded research to approach the profile of Carnegie Foundation's Research Universities with Very High Research Activity."

The R1 or "Very High" rank, though only a ranking, is essential because R1 is a necessary step toward Baylor becoming a Tier 1 university. Tier 1 is a broader, less specific category, but generally includes universities with higher national and global rankings (e.g., USN&WR or ARWU) and more academically capable students with more research opportunities built into both undergraduate and graduate curricula.

Moving toward Tier 1 means that we improve the quality, increase the scale, and deepen the impact of our scholarship. It means we will equip Baylor faculty to create new algorithms for detecting patterns in "big data," to write and perform the world's great music, produce new materials for industry, intelligently wrestle with ethical dilemmas and ameliorate psychological, social, and physical problems. When Baylor achieves this level of top tier scholarship, then we will demonstrate that a Christian Research University can indeed have a profound influence on the world; but first, we need to become an R1 university.

What Makes a University R1?

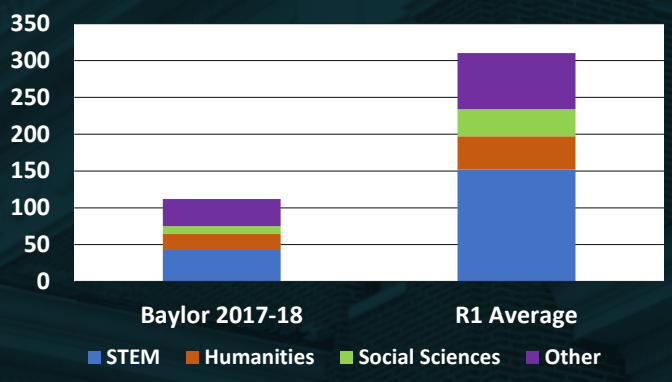
Three general metrics determine a university's place on the Carnegie research rankings: 1) research doctoral graduates, 2) research expenditures, and 3) research staff. These metrics are then divided by discipline (usually, STEM, Social Sciences, or Humanities), analyzed at both aggregate and per capita levels, ranked to reduce the effect of outliers, and subjected to principal component analyses to determine relative weights.

In the Graduate School, our primary concern is research doctoral graduates. An "average" R1 university will graduate about 45 humanities research doctorates each year, 37 in the social sciences, 152 in STEM, and 76 in "other" or professional fields, like Clinical Psychology, Ministry, Kinesiology, Entrepreneurship, Health Services, Social Work, and Curriculum and Instruction (all offered at Baylor). So, how do we compare to an average R1 university?

How close is Baylor to becoming an R1?

Table 1 shows just how very far we must go to graduating research doctorates equivalent to an average R1 university.

Table 1. Research Doctorates



Still, before concluding that R1 is a nice but totally impractical goal, we should consider two points: 1) We don't have to be "average." Half the R1s are below average and are still R1s. Some day Baylor will be an average R1, and some day subsequently, an above-average R1, but that is not necessary now for Baylor to become R1. 2) Being strong on one criterion off-sets weakness in another. My goal for the Graduate School is to greatly increase our research doctoral production so that our necessary increases in research funding can be more achievable.

Mathematical modeling suggests that Baylor can reach the R1 threshold with approximately:

- $65M in Science and Engineering funding (currently $25M),
- $11M in non-S&E funding (currently $4M),
- 70 STEM doctoral graduates (currently 33),
- 25 Social Science graduates (currently 11),
- 30 Humanities doctoral graduates (currently 26), and
- 150 Other/Professional doctoral graduates (currently 40).

Now there are a lot of caveats here, including the ways in which our *Illuminate* initiatives may help us meet our goals as well as possibly new criteria being added and changing criteria weights, but for Baylor, these broad goals are worthwhile and achievable. And, they are achievable within ten years. That doesn't mean Baylor will become an R1 university in ten years, but we have a reasonable chance, and it is, in my opinion, a reasonable goal.

One additional point about R1: Becoming R1 does not mean that the Graduate School is then what it should be. A high quality graduate school appropriate for a preeminent Christian research university needs much more than a high number of research doctorates graduating each year. Thus, metrics associated with quality graduate education comprise the bulk of this report.

Following in the tradition of earlier editions, this report allows you to skip to those areas of most interest, through the following hyperlinks:

BAYLOR UNIVERSITY

GRADUATE SCHOOL

Contributors

DEANS

Associate Dean: Chris Rios

Associate Dean for Research: Steve Driese

Assoc. Dean for Grad. Studies & Prof. Dev.: Laine Scales

STAFF

Administrative Manager, Dean's Office: Anna Henderson

Director of the Graduate School Office: Sherry Sims

Dissertation & Thesis Coordinator: Sandra Harman

Admissions Director: Tosha Hendrickson

Asst. for Grad. Studies & Prof. Dev.: Alanna Martinez

Assistant to the Dean: Candice Prose

Admissions & Recruitment Specialist: Amanda Clayton

Admissions & Recruitment Specialist: Alana Schaeper

Administrative Associate: Laura Sepanski

GRADUATE ASSISTANTS

Sociology: Daniel Allen

Curriculum & Teaching: Qingqing Chen

GRADUATE STUDENT ASSOCIATION

President: Rachel Renbarger

Exec. Vice President: Becca Cassady

Vice President: Tyler Prochnow

Vice President: Joshua Smith

Secretary: Theodore Cockle

Pictured on cover (left to right):
Dr. Robyn Driskell, Vice President for Internal Administration and Compliance and Chief of Staff; Dr. Jasmine Wise, Sociology PhD graduate; and Dr. Kevin Dougherty, Associate Professor & Graduate Program Director, Sociology.

Counts for Graduate Students and Programs

Counts for Graduate Students and Programs

The number of Baylor graduate students depends on the definition of "graduate students." If the focus is on only those students under the purview of the Graduate School, then professional students in the Law School, Seminary, and Masters' students in Social Work are not counted. There are also distinctions between "head counts" and "program counts," since, for example, some students may be working on a BBA and MACC at the same time. If so, they are counted as undergrads by head count, but counted as graduate students under a program count.

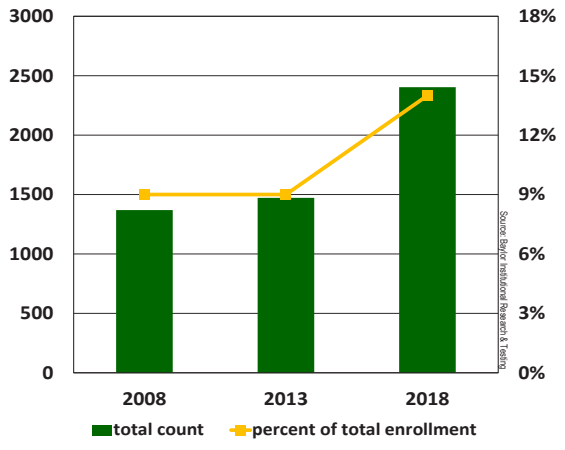
How Many Graduate Students Does Baylor Have?

By program counts, Baylor has 3,303 graduate and professional students, and when we don't include those in Law, Seminary, and Social Work, that leaves 2,403 (73%) under the purview of the Graduate School. That number is not nearly as large as it needs to be in order for Baylor to move to R1 status, but we are making progress.

Is That More Than Last Year?

Table 2 shows that the number of graduate and professional students under the purview of the Graduate School has grown both absolutely and relatively. In 2013, 9% of Baylor's overall enrollment was under the Graduate School; today that percentage is 14. The drivers to our growth are our growing professional master's degrees and our increased production of research doctorates, both of which can move us toward R1.

Table 2. Program Counts of All Graduate and Professional Students in the Graduate School



Where Have We Grown?

Table 3 lists our ten largest graduate programs and illustrates two important growth trends. First is the rapid growth of our online professional programs. All of the increase in our MBA comes from our online degree. The same is true for our DPT, EdD, and DNP. This trend will continue and help provide funding for our second trend, the growth in STEM PhDs. Physics and especially Chemistry are leading the way in the growth of our STEM PhDs, which moves Baylor closer to R1.

Table 3. Five-Year Enrollment Growth Patterns of Our Largest Programs

Program	2013	2018	Growth
Business Administration (MBA, EMBA, OMBA)	179	405	226
Physical Therapy (DPT)	48	129	81
Health Care Administration (MHA)	108	99	-9
Communication Sciences & Disorders (MS)	42	87	45
Chemistry (PhD)	54	75	21
Religion (PhD)	62	54	-8
Learning & Organizational Change (EdD)	0	52	52
English (PhD)	58	47	-11
Nurse Practitioner (DNP)	1	43	42
Physics (PhD)	29	41	12

Source: Baylor Institutional Research & Testing

Where Will We Grow?

Over the next five to ten years, the growth trends of online professional programs should continue and help fund the costs of increasing our research doctorates. Table 4 examines our growth projections for the programs that directly help us achieve R1: research doctorates. The "2023" column provides our projection based primarily on doctoral students already in the "pipeline." The "2028" column represents the Graduate School's R1 10-year goals. Most of our doctoral growth will be in the Professional/Other category, where the demand is high and the net cost of delivery is low. Also growing substantially are the programs in STEM, which have strong job markets for graduates and considerable impact on R1.

The graduation numbers of our doctoral programs listed in Table 4 suggest programs that are relatively young and small. While our programs are small, Baylor has been involved in doctoral education for almost seventy years. The chronology in Table 5 shows an early (1951) start followed by little growth until the 1990s. Since then, new PhD programs have been added at a relatively rapid and consistent rate.

...the increased presence and active engagement of graduate students at Baylor will expand the University's impact on the world.

Illuminate

Counts for Graduate Students and Programs

Table 4. Research Doctoral Production at Baylor
Current Counts and Five-Year Projections

	Research Doctoral Program	Annual Doctoral Graduates Per Program		2028 R1 Goal
		Current[1]	2023 [2]	
STEM	Biology (PhD)	3.3	5	
	Biomedical Studies (PhD)	5.3	3	
	Chemistry (PhD)	7.7	10	
	Computer Science (PhD)	0.0	3	
	Ecological, Earth, and Env. Sci. (PhD)	0.7	3	
	Elect. & Comp. Engineering (PhD)[3]	3.7	5	
	Environmental Science (PhD) [3]	0.3	2	
	Geology (PhD)	3.0	4	
	Information Systems (PhD)	3.0	3	
	Mathematics (PhD)	4.0	4	
	Mechanical Engineering (PhD)[3]	0.7	4	
	Physics (PhD)	3.3	4	
	Statistics (PhD)	6.3	6	
	Total	**41.3**	**56**	**70**
Humanities	Church Music (PhD)[3]	0.0	1	
	English (PhD)	7.7	6	
	History (PhD)	1.0	2	
	Philosophy (PhD)	4.7	5	
	Religion (PhD)	7.7	7	
	Total	**21.1**	**21**	**30**
Social Sciences	Educational Psychology (PhD)	3.0	4	
	Political Science (PhD)	2.7	4	
	Psychology and Neuroscience (PhD)	3.0	4	
	Sociology (PhD)	4.0	4	
	Total	**12.7**	**16**	**25**
Professional/Other	Church Music (DMA)[3]	0.0	1	
	Clinical Psychology (PsyD)	5.0	5	
	Curriculum & Instruction (EdD)	2.0	1	
	Curriculum & Teaching (PhD)	2.0	3	
	Learning & Organizat. Change (EdD)[3]	0.0	50	
	ENPH/KENPH (PhD)	2.0	3	
	Entrepreneurship (PhD)[3]	0.0	2	
	Health Services Research (PhD)[3]	0.0	2	
	Higher Edu. Studies & Ldrshp. (PhD)[3]	0.0	2	
	Occupational Therapy (DSc)	4.7	1	
	Physician Assistant (DSc)	14.3	20	
	Physical Therapy (DSc)	5.0	1	
	Social Work (PhD)[3]	1.0	2	
	Total	**36.0**	**93**	**150**
GRAND TOTAL		**111**	**186**	**275**

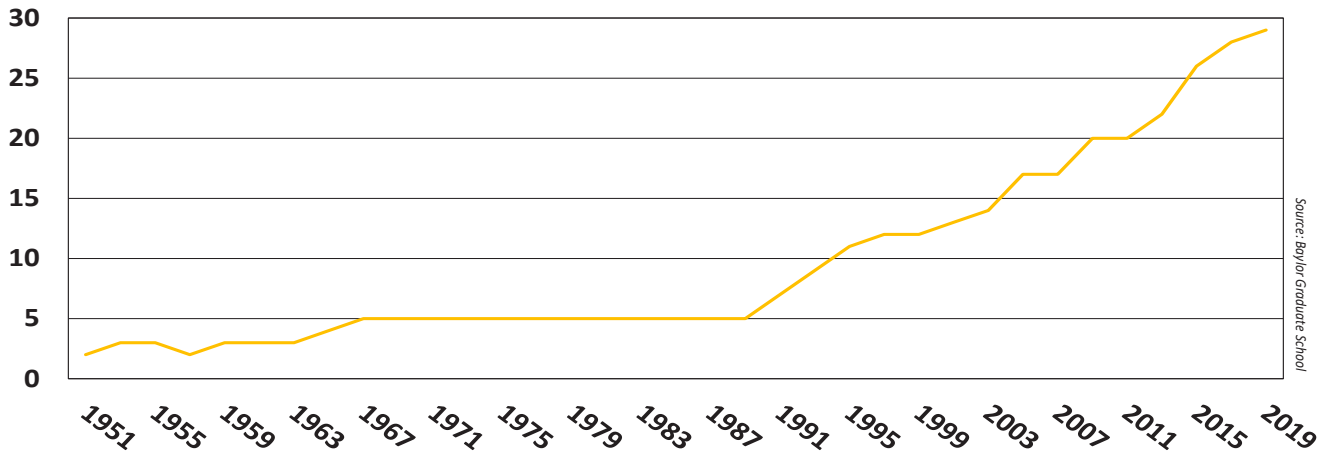
Source: Baylor Graduate School

[1] *Three year annual avg. (Summer 2015 – Spring 2018)*
[2] *Projected for 2022-23*
[3] *New program*

History of PhD Programs at Baylor

1951	English
1951	Education (discont. 1956)
1952	Chemistry
1959	Psychology
1965	Physics
1966	Religion
1990	Biomedical Studies
1990	Geology
1992	Statistics
1993	Church-State Studies (discont. 2011)
1994	Biology
1995	Sociology
1997	Educational Psychology
2001	Mathematics
2003	Philosophy
2005	Relig., Politics & Society (discont. 2011)
2005	Kines., Exercise Nutr. & Health Promo.
2005	Political Science
2008	Ecological, Earth and Env. Sciences
2008	Information Systems
2009	Curriculum and Teaching
2011	Electrical and Computer Engineering
2011	History
2013	Church Music
2013	Social Work
2014	Higher Edu. Studies & Leadership
2014	Mechanical Engineering
2015	Environmental Science
2015	Entrepreneurship
2016	Computer Science
2016	Health Services Research
2018	Preaching

Table 5. Number of PhD Programs at Baylor

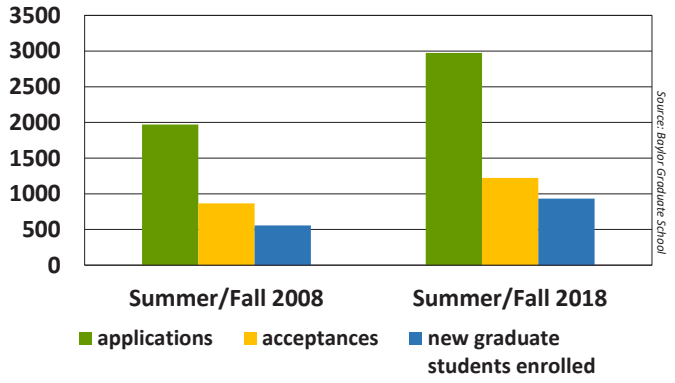


Source: Baylor Graduate School

Recruiting and Retaining Academically Excellent Students

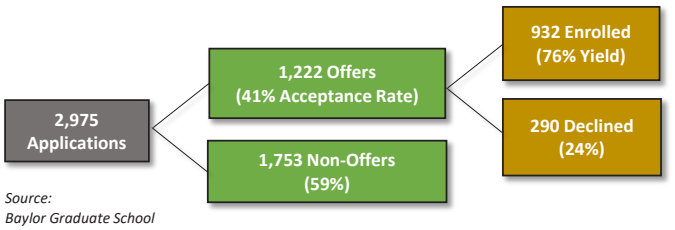
Baylor must and will recruit an academically excellent graduate student body. Table 6 shows that the number of students applying to graduate programs at Baylor has grown dramatically, while the number of new graduate students admitted and enrolled have grown by lesser amounts.

Table 6. Graduate Applications & Enrollment



For our visibility, the increase in applications reflects a growing national reputation for Baylor's graduate programs. For quality, when coupled with our limited growth in overall graduate admissions, the result is an increasingly selective Graduate School. Table 7 shows that we have over twice as many applications as acceptances and over twice as many accepted applicants enrolling as those who declined.

Table 7. From Graduate Applications to Enrollments (2018)



Source: Baylor Graduate School

Although Baylor offers almost one hundred graduate degree options, just five professional programs generate almost half (48%) of our applications. Table 8 shows that those highly visible programs are maintaining their popularity, and with the new online degree option, the MBA has greatly increased its number of applications.

Table 8. High-Applicant Programs

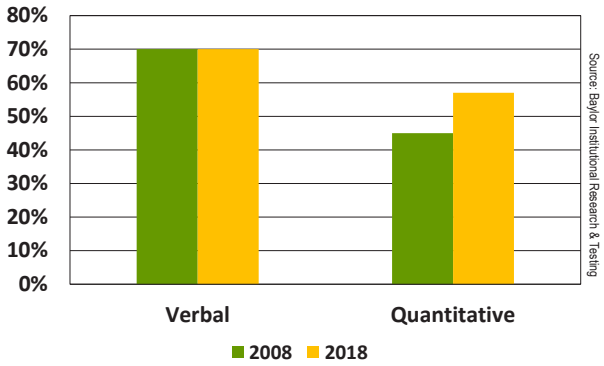
Program	2015-2016*	2016-2017*	2017-2018*
Business Admin. (OMBA)	304	304	425
Comm. Sciences & Disorders (MS)	342	355	378
Clinical Psychology (PsyD)	295	265	274
Business Admin. (MBA)	237	211	197
Accounting (MAcc)	143	128	164
Physics (PhD)	88	103	77
Chemistry (PhD)	70	67	74
Business Admin. (EMBA)	75	69	72
Religion (PhD)	71	82	63
Psychology (PhD)	59	69	63
Performance (MM)	66	76	62
Statistics (PhD)	68	64	50

Source: Baylor Institutional Research & Testing

**Summer, Fall and Spring Terms for academic years*

The growing number of applications has typically produced greater selectivity and higher GREs. While our verbal scores have held constant and our quantitative GRE scores have improved over the last ten years, we lose out on occasion with the strongest applicants. Accordingly, we now offer enhanced support packages that will improve our offers to applicants likely to receive acceptances from several strong programs in addition to Baylor.

Table 9. Mean GRE Percentiles



As we might expect, students planning for graduate studies in the humanities score higher on the verbal section than those planning to study in STEM fields. The verbal GRE percentiles for our humanities doctoral programs are exceptionally strong, with the mean percentiles in the 90s. Conversely, the highest quantitative percentiles are in our STEM programs.

Preeminent universities attract the best and the brightest men and women to their campuses....

Illuminate

Table 10. Top Mean GRE Verbal Percentiles by Doctoral Program

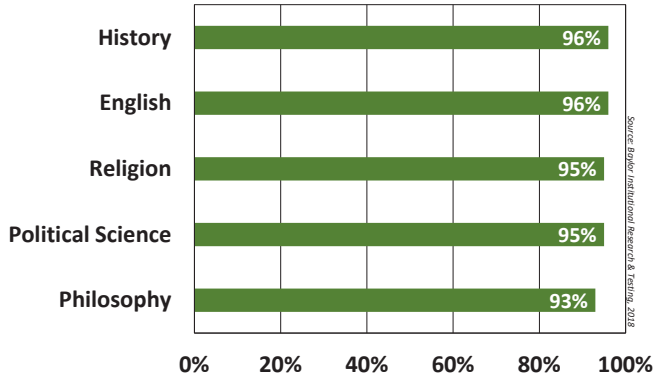


Table 11. Top Mean GRE Quantitative Percentiles by Doctoral Program

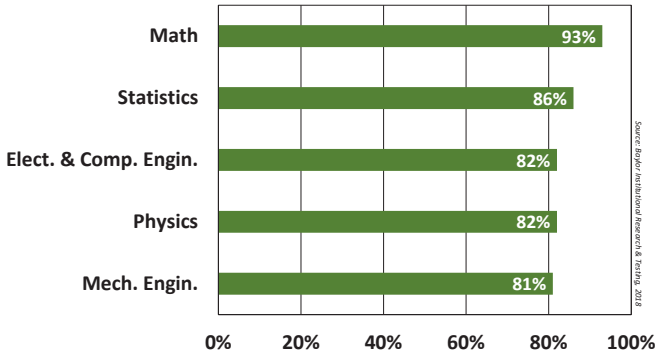


Table 12. Margin by Which Baylor Mean Verbal GRE Percentiles Exceed Global Mean Verbal GRE Percentiles

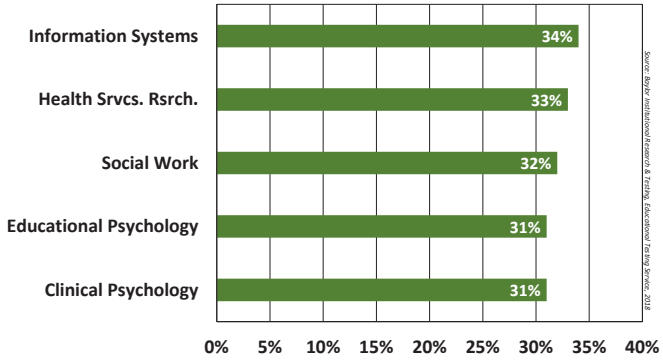
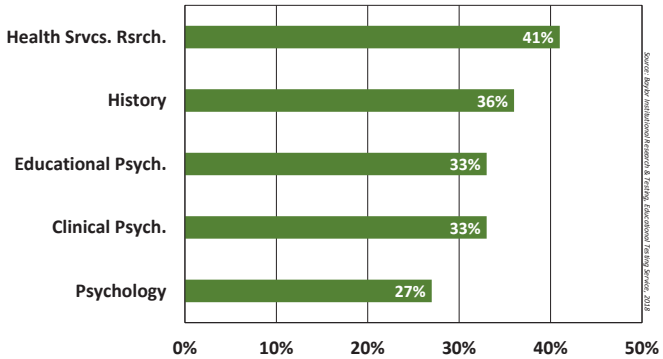


Table 13. Margin by Which Baylor Mean Quantitative GRE Percentiles Exceed Global Mean Quantitative GRE Percentiles



Another way of identifying high-performing doctoral programs is through comparison to global disciplinary means. For example, our relatively new PhD program in Health Services Research performs extremely well on both verbal and quantitative comparisons. Table 12 shows that our Health Services Research students score, on average, 33 percentage points higher on the verbal section of the GRE than do Health and Medical Sciences applicants globally, and a similar pattern holds true for our doctoral students in Clinical Psychology, Social Work, Information Systems, and Educational Psychology. Table 13 shows an even larger advantage, with our Health Services and Research students scoring a remarkable 41 percentage points higher on the quantitative section of the GRE. Our students in History, Clinical Psychology, Psychology, and Educational Psychology are also exceptionally strong mathematically in comparison to other students in their disciplines.

Retention and Diversity

Nationally, retention is a serious problem for graduate schools. The Council of Graduate Schools estimates that, seven years after enrollment, national PhD graduation rates are only about 50%. Fortunately, Baylor's retention and graduation rates are much better than the national norms. Most recently, over 60% of our PhD students have graduated within seven years.

At the graduate level, disagreement exists concerning whether or not international students should be included in the diversity count. If they are, Baylor's diversity measures will increase as we grow our STEM programs, and our need to provide English and cultural skills will grow accordingly. The overall minority percentage is 29%, but if we focus only on U.S. citizens for our racial and ethnic diversity measures, our Black and Hispanic percentages, while growing, total only 14% and suggest a strong need for improvement. An interesting note for gender diversity: The Baylor proportion of males to females is 51/49 at the graduate level, considerably different from Baylor's undergraduate ratio of 40/60.

Language Support for International Graduate Students

As our graduate student population becomes more diverse, the English for Academic Purposes (EAP) course offered each year by the Baylor Graduate School provides international graduate students and scholars with language assistance, and focuses on improving their

Opportunities for Graduate Student Research

English oral proficiency, presentation and communication skills, so that they can achieve academic success in the context of U.S. culture and more effectively assist Baylor undergraduates. A variety of techniques are applied to help strengthen EAP students' English learning, such as video-recording students' presentations and having them schedule weekly meetings with a native English-speaking assistant out of class.

Ms. Qingqing Chen instructs graduate students enrolled in the EAP course for improving their English-speaking and listening.

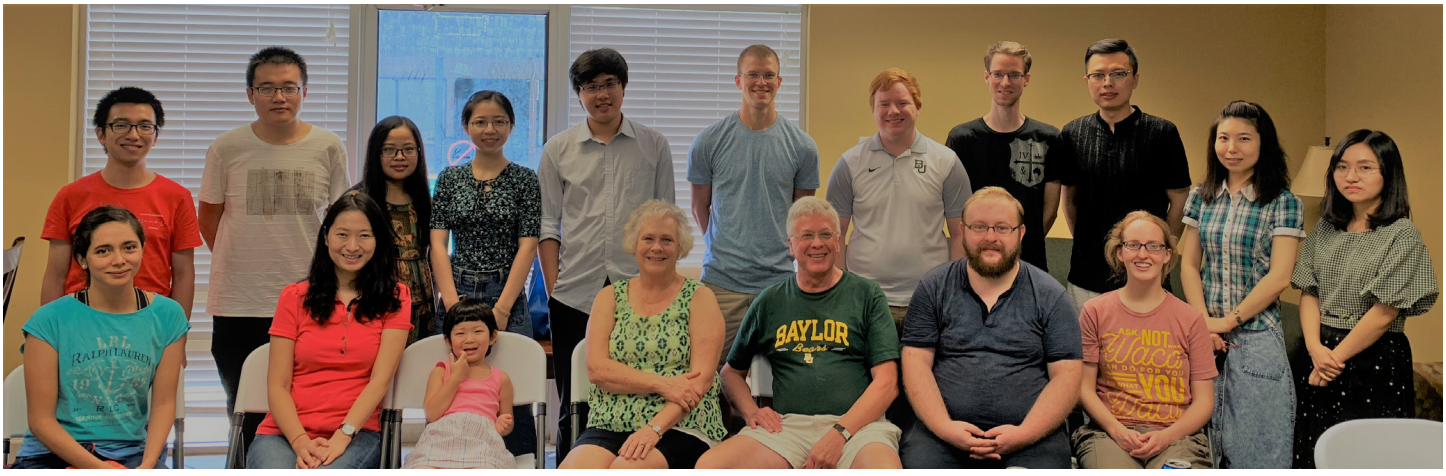
Ms. Qingqing Chen, a PhD candidate from the Department of Curriculum & Instruction, is currently teaching the EAP course. Since she started working as the EAP program director in the fall of 2016, 58 international graduate students and visiting scholars from 16 countries and regions, including China, India, Malaysia, South Korea, Taiwan, Vietnam, Tadzhikistan, Iran, Nigeria, Mexico, Peru, Czech Republic, France, Poland, Portugal and Russia, were enrolled or are currently attending the course.

During the fall semester of 2018 there are currently 12 students attending the EAP course, comprised of ten doctoral and two master's degree students; geographically, nine are from China, and the other three are from Peru, Mexico and Poland.

EAP students and family members participate in social activities to learn more about their cultures and improve their conversational English.

Opportunities for Graduate Student Research

Pro Futuris aspires for us to "produce research and creative work at the highest levels," and "increase opportunities for students to engage in research with faculty." These aspirations are fundamental for graduate education. One measure of how successful we are in these regards is the degree to which our students present their research at professional meetings in their discipline. With almost 800 presentations last year, our graduate students are producing research and actively engaging within their disciplinary guilds. This is a remarkable achievement, and I can think of no other measure that indicates more



EAP attendees at the October 2018 pot luck luncheon held in the commons room at the Quadrangle Apartments, with Dr. Steve Driese and his wife Marylaine.

clearly the exceptional skill and dedication of our graduate students and their faculty mentors.

Table 14. Presentations by Graduate Students at Professional Meetings

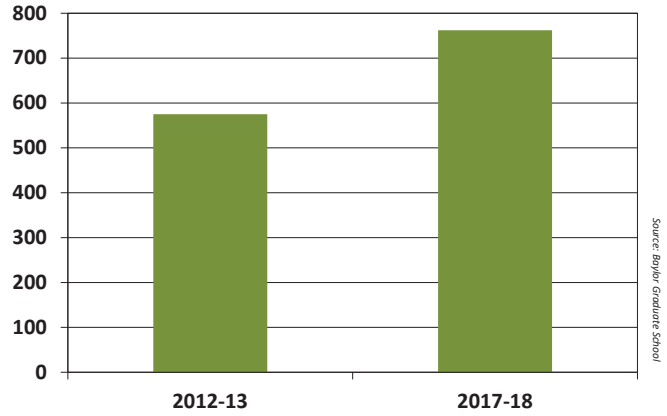


Table 15. Top Doctoral Programs for Graduate Student Presentations at Professional Meetings

Doctoral Program	2017-18 Total Student Presentations	Per Capita
Entrepreneurship	15	5.00
Kinesiology, Exercise Nutrition & Health Promotion	36	2.40
Psychology	45	2.25
Philosophy	64	2.13
Curriculum & Instruction	52	2.00

Source: Baylor Graduate School

Table 16. Top Master's Programs for Graduate Student Presentations at Professional Meetings

Master's Program	2017-18 Total Student Presentations	Per Capita
Public Health	50	1.79
Theater Arts	9	1.50
Curriculum & Instruction	9	1.13
Geology	13	0.93
History	7	0.88
Museum Studies	13	0.87

Source: Baylor Graduate School

Another and even more rigorous sign of our students' research prowess is their growing ability to publish their research in peer-reviewed, professional journals while they are still in our graduate programs. Our graduate students published over 600 such articles last year. Table 18 lists those doctoral programs that are leaders in graduate student publications. Our Physics department ranks first in published research for doctoral students, averaging almost five articles per student per year. This reflects a successful effort to engage their graduate students in the CERN laboratory experiments near Geneva.

Table 17. Peer-Reviewed Publications by Graduate Students in Professional Journals

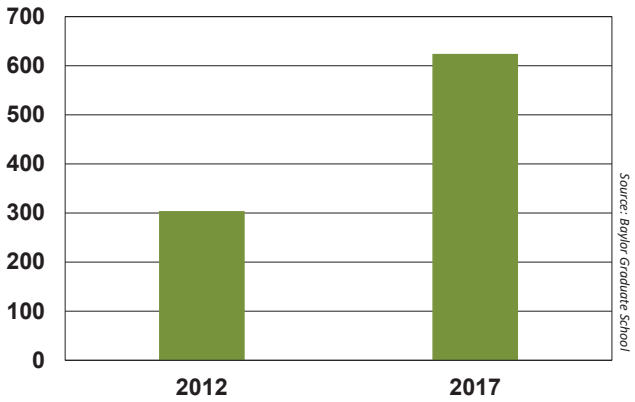
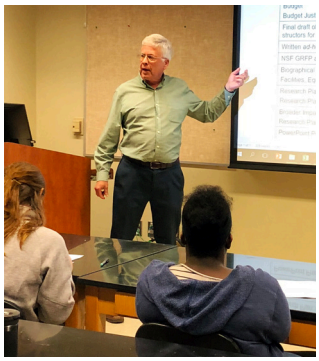


Table 18. Top Doctoral Programs for Annual Student Publications

Doctoral Program	2017 Total Student Publications	Per Capita
Physics	248	6.05
Kinesiology, Exercise Nutrition & Health Promotion	35	2.33
Educational Psychology	26	1.63
History	22	1.47
Information Systems	11	1.38
Environmental Science	23	1.35
Sociology	26	1.24
Biomedical Studies	23	1.10

Source: Baylor Graduate School

New Grant-Writing Support for Graduate Students – Associate Dean Steve Driese offered two sections of Graduate School-sponsored GEO 5V90, Seminar in Grant-Writing, where 11 graduate students, consisting of Geology and Biology students, each earned 2 credit hours in the fall semester of 2018. The course aim is to develop a



Steve Driese instructs the Seminar in Grant-Writing.

Integration of Faith and Learning

PhD dissertation or MS Thesis proposal, using the NSF research grant as a model. This year two of the graduate students enrolled in the course have applied for the NSF Graduate Research Fellowship Program award.

In recognition of the growing quality of graduate student research in recent years, the Graduate School now presents Outstanding Dissertation Awards for exceptional scholarship, research, and writing by doctoral students. Three prizes are given out annually, one each for the STEM, humanities, and social science fields. The 2016-2017 winners are listed here:

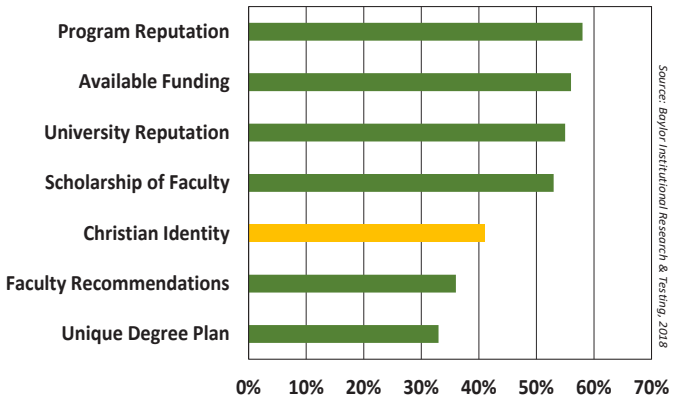
2017-2018 Outstanding Dissertation Awards	
Alireza Abdolvahabi (Chemistry)	"Aggregation of Cu, Zn Superoxide Dismutase in Amyotrophic Lateral Sclerosis: Kinetic, Mechanistic, and Therapeutic Approaches"
Laurie G. Giddens (Information Systems)	"Shopping for a Cause: Exploring the Role of Information Systems in Ethical Consumption"
Scott Ryan (Religion)	"Cosmic Conflict and the Divine Warrior in Paul's Letter to the Romans"

Integration of Faith and Learning

Pro Futuris includes a list of "Core Convictions." First among them is that Baylor will "encourage the integration of Christian faith and the intellectual life." Table 19 reports on a survey we give to all new graduate students. While it reports that our reputation, scholarship, and funding matter a lot to graduate students, we continue to recruit and enroll students who value both our strong academics and our strong faith commitment.

It is both interesting and encouraging to note that while our exit surveys show that while 42% of our graduate students deliberately sought out Baylor because of its Christian identity, 57% of our graduates report developing a deeper faith and 89% report quality spiritual experiences.

Table 19. Why Graduate Students Choose Baylor



In addition to the Christian role models provided by their mentors, the Graduate School offers a number of programs that help students grow spiritually.

- Conyers Scholars – Sponsored by the Graduate School and the Institute for Faith and Learning, this program encourages and supports doctoral students interested in connections between faith, learning, and vocation. The program convenes dinners and seminars monthly.
- Ramm Scholars – A cross-disciplinary program for doctoral STEM students and MDiv students sponsored by the Graduate School and Truett Theological Seminary. It encourages and supports students who are interested in the engagement between Christianity and science.
- BCU Scholars – A program co-sponsored by the International Association of Baptist Colleges and Universities for PhD and MFA students from Baptist universities who wish to teach in a Baptist college or university upon graduation.

BCU Scholars – Back row left to right: Russell Browder, Peter Coogan, Jacob Randolph. Front Row: Dr. Larry Lyon, Taylor Thompson, Joshua Pittman, Jonathan Stanfill, Dr. Laine Scales

Outstanding, Excellent Teaching

That Baylor possesses a "rich tradition of outstanding teaching" and that we remain "committed to excellence in teaching" are among the least surprising statements in *Pro Futuris*. Since many of our graduate students plan to teach after graduation, we must help them develop pedagogical as well as disciplinary knowledge. Accordingly, the Graduate School has developed several programs providing pedagogical training.

- Preparing Our Future Faculty (PROFF) – The Graduate School offers ten free, interrelated workshops each academic year designed to assist our students with the processes of academic job searches and entering the ranks of higher education professionals.

- Teaching Capstone in Higher Education (TeaCHE) – A self-paced training for students wishing to teach in higher education. With an increasingly tight and competitive job market, this capstone is intended to enhance students' readiness to teach in higher education, thereby increasing their marketability.

- New TOR Orientation – Required training for new teachers of record and lab instructors covering the Family Educational Rights and Privacy Act (FERPA), Title IX, responses to students of concern, and other related issues.

- Seminars for Excellence in Teaching (SET) – A series of free seminars on various aspects of teaching offered by Baylor's Academy for Teaching and Learning. SET seminars facilitate the sharing of ideas and insights about teaching and learning.

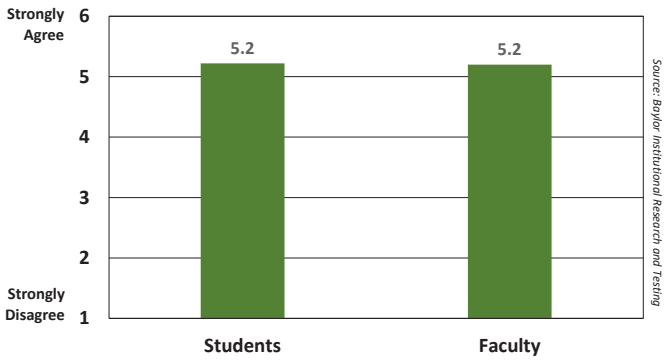
- Teaching Awards – Awards that recognize excellence in teaching among graduate students. Recipients are given the opportunity to attend a teaching conference and also receive a plaque commemorating their achievement.

One important measure of the success of these programs is Baylor's student assessments of teaching. Our goal is always to aim for the high levels of teaching quality provided by Baylor's faculty. Table 20 shows that, on average, undergraduates in classes taught by graduate students are equally likely to agree that they "learned a great deal from this course" when compared to sections taught by our faculty. While teaching quality can never be measured in a single question, these assessment data suggest that our graduate students are learning valuable pedagogical skills from their faculty mentors.

Baylor will design opportunities to enhance the quality of teaching in all forms.

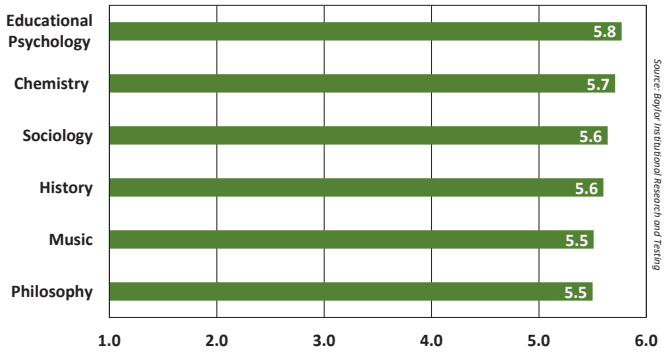
Illuminate

Table 20. Graduate Student and Faculty Teaching Assessments* (average: 2015-16 through 2017-18)



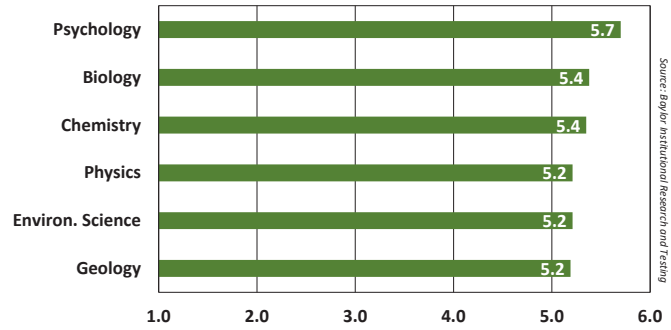
*Measured by answers to question 14, "I learned a great deal from this course." Response items include: strongly disagree, disagree, slightly disagree, slightly agree, agree, and strongly agree.

Table 21. Top Programs for Graduate Student TOR Evaluations for 2017-18*



*Based on programs having at least three sections taught by Teachers of Record and measured by response to "I learned a great deal from this course." Response items include: strongly disagree, disagree, slightly disagree, slightly agree, agree, and strongly agree.

Table 22. Top Programs for Graduate Student Lab Instructor Evaluations for 2017-18*



*Measured by response to "I learned a great deal from this course." Response items include: strongly disagree, disagree, slightly disagree, slightly agree, agree, and strongly agree.

Community-Building

Representative of our commitment to quality teaching, each year the Provost honors graduate students who, by a rigorous selection process, have done an exceptional job of undergraduate teaching. The 2016 honorees are shown below:

Teaching Award Winners – left to right: Nicholas Werse (Religion), Dani Crain (Biology), Dr. Gary Mortensen (Dean, School of Music), Blake Kent (Sociology), Kristina Amrani (KENHP), Dr. Larry Lyon (Dean, Graduate School), Corina Kaul (Educational Psychology), and Elise Leal (History)

Community-Building

Pro Futuris states that "we will provide additional community-building opportunities for graduate and professional students." Much of this is done exceptionally well at the program level. However, the Graduate School offers unique opportunities for interdisciplinary community.

- Graduate Student Association – A student organization that strives to enrich the academic and social life for graduate students as well as advocate for the rights of these students and voice their concerns.
- Graduate Student Orientation – Half-day orientation for incoming graduate students that provides a general introduction to University traditions, services, and life as a Baylor graduate student.
- SIC 'EM (Student Intellectual Community Enhancement Money) – Funding for student-initiated events to build intellectual community. SIC 'EM projects contribute to a vibrant intellectual community at Baylor and provide a means for informal discussion and presentation of academic work.
- Life on the Grad Line – A series of free 60-minute workshops designed to assist students in their adjustment to graduate school. The workshops cover topics such as preparing to write the dissertation or thesis; preparing for the job search; maintaining mental health; and cultivating your professional identity.
- Graduate Student Leadership Council – A group of student leaders from departmental graduate student organizations. The leaders of these groups meet with the Graduate School each semester in order to increase dialogue among the departments and with the Graduate School.
- Graduate Student Housing Communities and Garden at The Quadrangle and Browning Square – These communities offer accommodations within walking distance of campus for singles and students with families. Through student-led programming, these communities foster relationships across academic disciplines. Access to the Community Garden offers opportunities for residents to grow their own food.

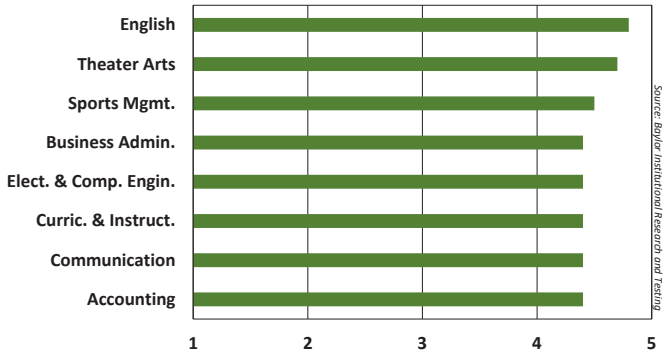
Above: Students enjoy food and fellowship at the graduate student housing communities.

Transformative Education

Arguably the most important and ambitious goal from *Pro Futuris* and *Illuminate* is directed toward transforming our students. *Pro Futuris* calls for Baylor to provide "a transformative educational experience" and claims that these "few short years on the Baylor campus…should be a source of pride and benefit throughout their lives." This extremely worthy goal is also extremely difficult to measure. However, we do ask each graduate student when they file for graduation, "Knowing what you know now, would you recommend Baylor to prospective students in

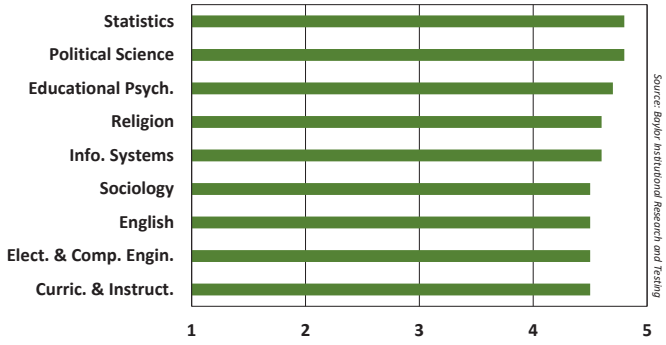
your field?" Exit survey (taken the semester of graduation) responses include: (1) definitely not, (2) probably not, (3) maybe, (4) probably and (5) definitely. It's not exactly measuring transformation, but this is the closest indicator we have. Overall, our graduate programs score well on student satisfaction – a little higher than "probably" but below "definitely," with a mean of 4.2. Some programs do exceptionally well in graduating satisfied students, and they are listed below.

Table 23. Exit Survey: Most Satisfied Master's Students*



*Measured by response to "Would you recommend Baylor to prospective students in your field?" Response items include: definitely not, probably not, maybe, probably, and definitely.

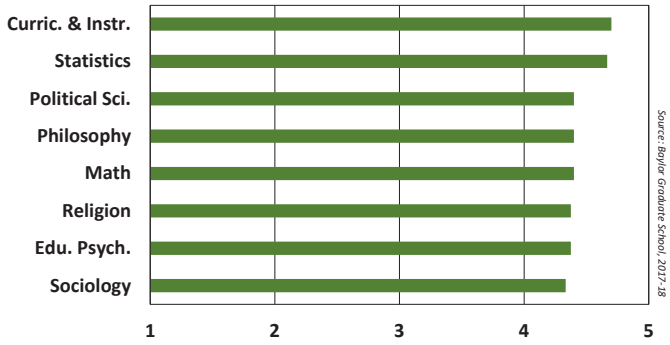
Table 24. Exit Survey: Most Satisfied Doctoral Students*



*Measured by response to "Would you recommend Baylor to prospective students in your field?" Response items include: definitely not, probably not, maybe, probably, and definitely.

Still, one could argue that our soon-to-graduate students cannot possibly know if their Baylor education will be, in the words of *Pro Futuris*, a "benefit throughout their lives" until they have lived more of their lives. Maybe they just thought they were transformed when responding to the exit survey. In terms of measurement, the best we can do here is our alumni survey, administered to all PhD students one year after graduation, asking them the same "would you recommend" question. Those responses indicate that graduates from our doctoral programs in Math, Curriculum & Instruction, Statistics, Philosophy, Religion, Educational Psychology, and Sociology are most likely to believe their program was beneficial, all scoring very near "definitely" on the "recommend Baylor" question, with graduates from Curriculum & Instruction and Statistics reporting the strongest response.

Table 25. Alumni Survey: Most Satisfied Doctoral Graduates*



*Measured one year after graduation by response to "Would you recommend Baylor to prospective students in your field?" Response items include: definitely not, probably not, maybe, probably, and definitely. (Three year rolling average for programs with five or more responses.)

Funding Graduate Education

Graduate education is expensive; research-intensive programs are especially so. Yet graduate education and research is one of the important characteristics that is distinctive about Baylor as a Christian university, and like other important characteristics of this university—high quality undergraduate education, strong student support services, winning athletic programs—it costs money. Exactly how much depends on complex assumptions such as how to allocate the costs of faculty and facilities that support both graduate and undergraduate students. Still, it is incumbent on us to develop new sources of program support and revenues associated with high quality graduate education.

Last year, our faculty generated $2.6M in external research grants to pay for graduate students. That is an all-time high in external funding for graduate stipends, but we can and will do better. Another source of support comes from our professional master's programs. As we add new programs that directly translate into high-demand professional jobs, the income they generate can assist the larger research initiative.

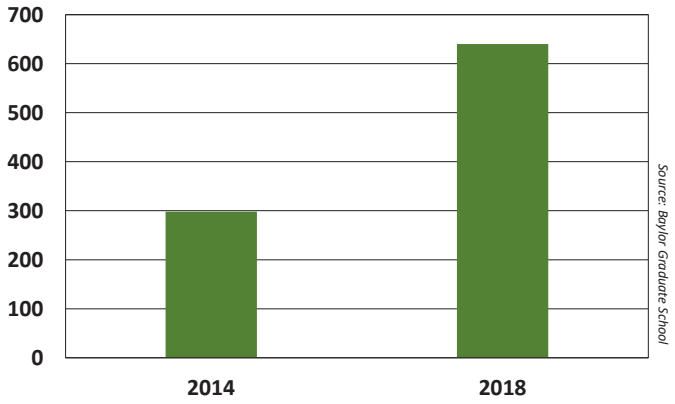
We have a new initiative with graduate programs in Arts & Sciences, allowing them to add more funding for their graduate programs through new dollars from graduate tuition. Journalism leads our Arts & Sciences programs in generating new tuition funds for graduate education.

Graduate Student Insurance

Graduate Student Insurance

In recent years we became increasingly aware of the number of doctoral students on our campus who received no financial help in purchasing health insurance—this despite the fact that we have offered insurance subsidies for over a decade. At the same time, the cost of health insurance continued to rise. With input from graduate students, Graduate Program Directors, and close attention to national trends, we designed a new policy to reallocate existing resources in a way that expanded the number of eligible students. Today, all incoming full-time, fully-funded doctoral students and some qualifying master's students receive an 80% subsidy for their individual insurance premiums. The primary goal in making these changes was to increase the number of subsidies offered, a goal toward which we have made considerable progress by roughly doubling the number of eligible students.

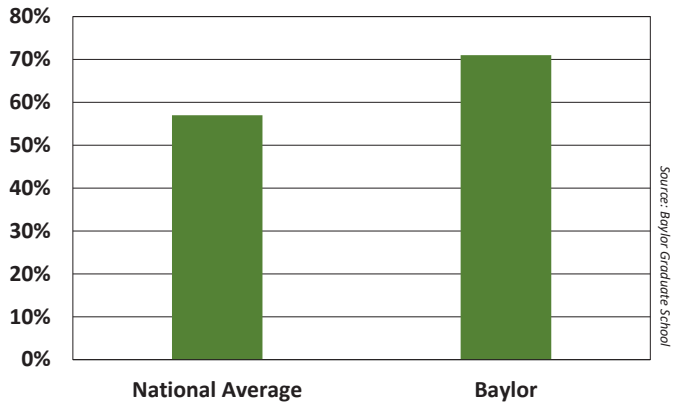
Table 26. Health Insurance: Number of Eligible Graduate Students



Graduation Rates, Time to Degree, and Debt

Graduation rates for doctoral students are difficult to assess. National reports vary from 50%, the most commonly cited overall completion rate, to a range between 55% and 65% depending on program and discipline. In 2008, The Council of Graduate Schools reported that the rate of completion after ten years was 57%, with 20% of these finishing after their seventh year. We are thus pleased that our ten-year completion rate is over 71%, which is well above the national average. While there remains room for improvement, our high PhD completion rate is testament to the quality of both our faculty and our students.

Table 27. Ten-Year Doctoral Completion Rate



The most recent National Science Foundation's Survey of Earned Doctorates (SED, 2016) reports that Baylor's median time to doctoral degree (5.2 years) outperforms the national average at other High Research Universities (5.7 years). This relatively quick time to degree helps provide the "judicious stewardship" called for by *Pro Futuris*. Further, as reflected in tables 28 and 29, the past five years of SED reports indicate a growing percentage of students graduating without school debt and a decreasing percentage of students graduating with high levels of debt ($30,000 or more). This trend suggests steady progress in our attempt to fulfill *Pro Futuris's* charge to be "ever-vigilant about monitoring…the educational debt our students accumulate."

Table 28. Doctoral Graduates with No Debt

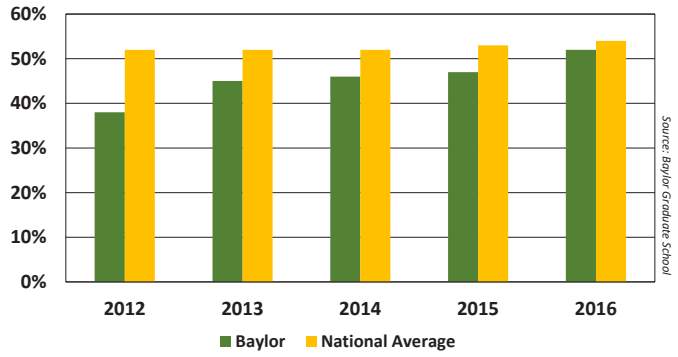
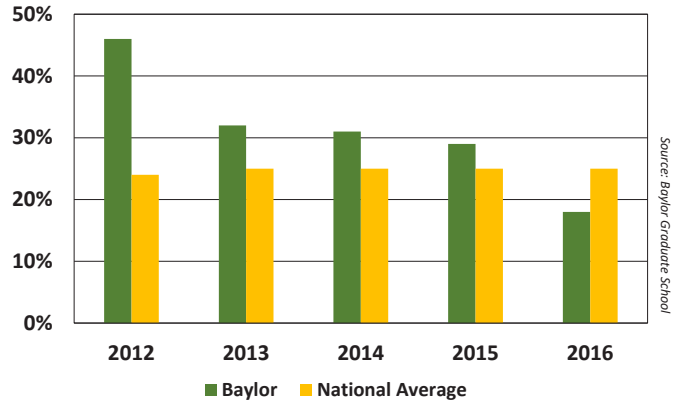


Table 29. Doctoral Graduates with High Debt



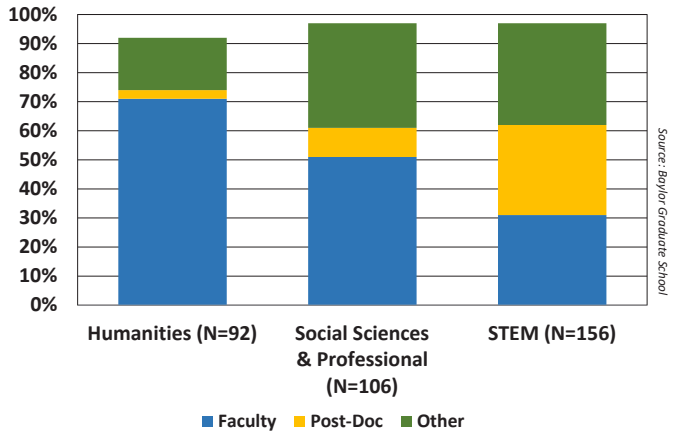
Placement of Doctoral Graduates

The latest NSF Survey of Earned Doctorates report offers good news about our PhD programs: 62% report definite employment or postdoctoral study at the time of graduation, a rate that exceeds both High Research Institutions (55%) like Baylor and the overall national average (60%).

According to our most recent survey of PhD, EdD, and PsyD graduates (n=392, response rate=94%), the full-time employment rate of Baylor doctoral graduates over the past five years is 93%. Although no reliable national data are available for comparison, these numbers appear healthy. Full-time employment by broad discipline is reported in Table 30. The patterns are probably what most of us would expect: Doctoral graduates in the humanities are more likely to be employed in the academy; STEM graduates are the most likely to hold industry jobs; the social sciences are in between. The humanities data also reflect the challenges posed by the academic job market.

Table 30. Full-Time Employment for Baylor Doctoral Graduates

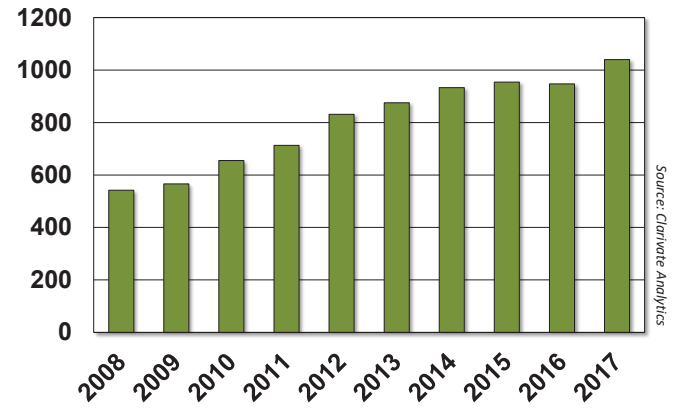
Known, Job-seeking graduates Spring 2014-Spring 2018 (N=369)



Scholarly Profile of Our Faculty

Pro Futuris aspires to "raise the scholarly profile of our faculty, as evidenced by increased publications, citations, awards, and externally funded research." Graduate programs, especially doctoral programs, cannot be successful without faculty who win grants and awards and who publish widely-cited research. Our growing research prowess is clearly illustrated by the number of articles our faculty publish. We have now exceeded one thousand articles per year in the world-wide database of major peer-reviewed journals maintained by Clarivate Analytics.

Table 31. Baylor Faculty Total Publications



More broadly, the Office of Institutional Research & Testing maintains the annual Academic Analytics (AcA) database that counts the publications, citations, awards, and grant dollars – the same measures specified in *Pro Futuris* – of every graduate faculty member of every PhD program in the nation. For 2017, AcA's most recent

release, fifteen of our PhD programs are among the strongest in the nation in terms of faculty scholarship, the largest number ever for Baylor. We welcome one new PhD program to the "Top Half" list: Biology, debuting at 52%. Our PhD program in Philosophy leads, with its faculty placing among the top 3% in the nation. As a point of temporal reference, in 2007, Baylor had four PhD programs ranked in the top half. In only ten years, we have more than tripled the number of highly ranked doctoral programs measured by the scholarship of our faculty.

Table 32. Highest Academic Analytics Rankings for 2017

PhD Program	National Percentile
Philosophy	97
Religion	95
Information Systems	91
Biomedical	82
Entrepreneurship	82
Environmental Science	77
KENHP	76
Higher Education Studies & Leadership	75
Sociology	74
Political Science	69
Educational Psychology	65
History	64
Earth, Ecological, and Env. Sciences	64
Mathematics	53
Biology	52

Source: Academic Analytics

As a new external measure of the quality of our PhD programs, we are evaluating three graduate programs this fall: Sociology, Geology, and Kinesiology, Exercise Nutrition & Health Promotion. Each program is being assessed by three external reviewers from universities having graduate programs with strong reputations. We will conduct 3-4 such reviews each year, which will help identify individual program strengths, as well as weaknesses, and will provide guidance for making decisions regarding program requests for new resources.

...The world needs a preeminent research university that is unambiguously Christian – where such a commitment does not imply a lack of scholarly inquiry, but rather requires scholarship and creative endeavors at the highest levels of quality to complement and inform its teaching and service.

Illuminate

Concluding Notes from Dean Lyon on Graduation and Transformation

Very few universities celebrate graduation as well as Baylor, and that is especially true for our Graduate School graduates. Several Baylor schools and programs host hooding and pinning ceremonies for their graduates, and all our research doctoral graduates are hooded by their faculty mentors during Commencement. The doctoral graduates also take part in a dinner attended by their faculty and family and have an opportunity to publicly thank all those who have helped them achieve their new status. I have included several photos from our Doctoral Dinner on this page and on the following page.

The number graduating each year continues to grow, especially among our master's graduates, and significant increases in future years are projected for both master's and doctoral grads.

Those increases may lead to changes in the way Baylor formally recognizes our graduates. For Commencement, we may create a separate ceremony for Graduate School graduates or perhaps smaller ceremonies by school, or we may choose among several other options. This change will not be immediate, but the growth projections I see indicate that the way we do Commencement will have to change in the next few years.

For the Doctoral Dinner, the options are not as numerous nor as clear. Personally, I believe the Dinner is a unique, important celebration that represents what is special about graduate education at Baylor, and I am committed to its continuation. However, the Dinner can now last as long as Commencement, and I would very much appreciate any suggestions you might have as to how we can continue this valuable tradition as our number of doctoral grads grows.

The "first family" are among the guests at our Doctoral Dinner.

This growth in our number of graduates is tied to a continuing redefinition of what is expected of the Graduate School and Baylor graduate faculty. Collectively, the vision of *Baylor 2012*, the strategy of *Pro Futuris* and the initiatives of *Illuminate* call for nothing less than transformational efforts for faculty scholarship and

external funding. Such a transformation would have been inconceivable when I joined Baylor as an assistant professor in Sociology in 1975. It remained inconceivable, to me at least, when I became graduate dean in 1998. And yet, now, it is not only conceivable, it is doable.

Deans with doctoral graduates are also in attendance at the Doctoral Dinner.

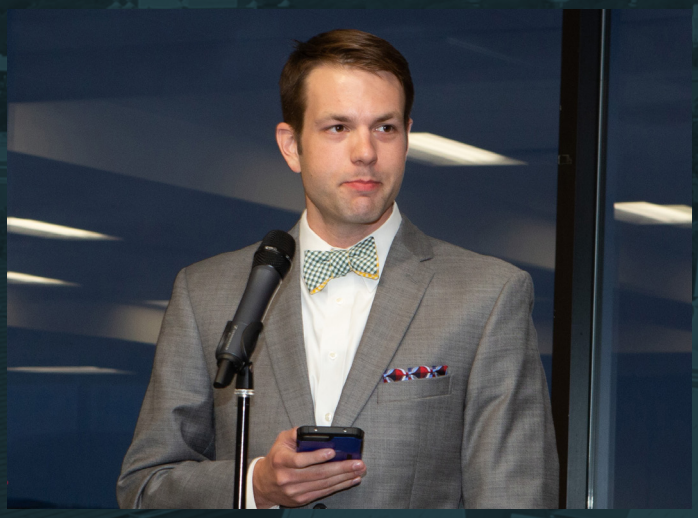
The growing number of articles tracked in Table 31 demonstrate that the transformation has begun. It is true that we have yet to experience similar levels of growth in external research funding; and that is our most significant challenge to reaching R1. However, the faculty in the fifteen programs listed in Table 32 are among the strongest scholars in the nation by objective measures such as publications, citations, awards, and external funding. Furthermore, these scholars are all employed by an unapologetically Christian university.

We *are* transforming Baylor into a nationally prominent, faith-based, research university. This is the compelling message embodied, collectively, in all our metrics. In and of itself, a ranking by Carnegie or Academic Analytics means little, but when combined with multiple measures of faculty and graduate student achievements and future improvements in external research support, they describe a university that takes seriously its most ambitious aspiration: "to become America's preeminent Christian research university." (*I* p. 7) This unique, remarkable goal encompasses and requires more than R1, even more than Tier 1. It encompasses and requires a transformation.

Larry Lyon
Vice Provost and Dean of the Graduate School
November 2018

BAYLOR
UNIVERSITY

Elise Leal earned her PhD in History and is now employed as an Assistant Professor at Whitworth University in Spokane, Washington.



Psychology doctoral graduate Andrew Holley has accepted a postdoctoral position at the University of Virginia.

Zhe Shi received his PhD in Chemistry & Biochemistry and has taken a postdoctoral position at Texas A&M University.

Graduate School Deans

LARRY LYON, *Vice Provost and Dean of the Graduate School.*

Dr. Lyon earned his Ph.D. from the University of Texas in Sociology and joined the Baylor Sociology Department in 1975. He began serving as Dean of Baylor's Graduate School in 1998. He is a Vice Provost, a Professor of Sociology, and the Director of the Baylor Center for Community Research and Development. His research interests include community sociology and faith-based higher education.

CHRIS RIOS, *Associate Dean.*

Dr. Rios joined the Graduate School in 2011 working in the area of professional development. In his current role as Associate Dean, he oversees enrollment management and academic technology. He also manages the Graduate School budget and directs the Bernard Ramm Scholars program.

In addition to his service in the Graduate School, Rios teaches undergraduate courses in the Department of Religion and the College of Arts and Sciences. He also leads the annual Adjunct Teaching Workshop for the Academy for Teaching and Learning. He is a historian of science and religion with publications that include *After the Monkey Trial: Evangelical Scientists and a New Creationism* (Fordham University Press, 2014).

LAINE SCALES, *Associate Dean for Graduate Studies and Professional Development.*

Laine Scales received her undergraduate degree from the University of North Carolina and her M.S.W. from The Southern Baptist Theological Seminary and completed her Ph.D. in Higher Education at the University of Kentucky. She began her Baylor career in 1999 as a faculty member in the School of Social Work. Since the fall of 2004, she has been Associate Dean of Graduate Studies and Professional Development, and in 2008, she moved to the School of Education as Professor of Higher Education. Scales has authored, co-authored, or co-edited ten books and over forty articles. She was state co-coordinator for Texas with the Office for Women in Higher education from 2006-2008 and co-founder of Baylor's bi-annual Women in the Academy conference.

STEVEN DRIESE, *Associate Dean for Research.*

Dr. Driese joined the Baylor faculty as the Chair of the Geosciences Department in August, 2004, serving until 2013, when he became the Graduate Program Director. Prior to coming to Baylor he taught at the University of Tennessee-Knoxville (1982-2004). He obtained his B.S. degree from Southern Illinois University in Carbondale, and the M.S. and Ph.D. degrees in geology from the University of Wisconsin-Madison.

Dr. Driese has published over 125 peer-reviewed journal articles and his research areas include reconstructing past landscapes, climates and atmospheric chemistry from fossil soils, which are known as "paleosols". His research investigations involve both field and laboratory components, and use modern soils as analogs for interpreting paleosols. He is a Fellow of the Geological Society of America and the American Association for the Advancement of Science, and is an Honorary Member of SEPM (The Society for Sedimentary Geology).

BETH ALLISON BARR, *Associate Dean for Student Development (beginning in January of 2019).*

Beth Allison Barr is an Associate Professor of History and Graduate Program Director in History at Baylor University. She received her Ph.D. in Medieval History from the University of North Carolina at Chapel Hill in 2004. Her research focuses primarily on women and gender identity in medieval English sermons, and her doctoral students mostly work on women and sermon literature, 1200-1700. Barr is the author of T*he Pastoral Care of Women in Late Medieval England* and co-editor of *The Acts of the Apostles: Four Centuries of Baptist Interpretation*. She is currently working on her next book, *Women in English Sermons, 1350-1500*. She is also a regular contributor to *The Anxious Bench*, a religious history blog on *Patheos* where she often writes about graduate education.

Graduate School Staff

AMANDA CLAYTON, *Admissions and Recruitment Specialist.*

Amanda is one of the Admissions and Recruitment Specialists for the Graduate School. She is responsible for planning and executing the Graduate School's communications plan and producing content for the Graduate School's website and recruitment materials. She also plays an active role in processing applications for our many graduate programs and attends recruiting events.

SANDRA HARMAN, *Dissertation & Thesis Coordinator.*

Sandra came to Baylor in 1987 and has worked with graduate education most of that time. Review of dissertations and theses is one of her primary roles in the Graduate School, along with the administration of the Graduate School Travel Awards program.

ANNA HENDERSON, *Administrative Manager, Office of the Dean.*

Anna has been with the Graduate School since 2007. She is the manager for the tuition and stipend authorization system. She also administers stipend enhancements and the Presidential Scholars fund, Graduate Council meetings, the PhD assessment process, and the degree proposal process.

TOSHA HENDRICKSON, *Admissions Director/Assistant to Associate Dean.*

Tosha, joined the Graduate School in 2016. She directs the operations of the Graduate Admissions office, serving as administrator for access to the admissions database, keeping the online listing of Graduate Faculty, and updating the online graduate application. She also aids the Associate Dean with enrollment management and manages recruiting funds.

ALANNA MARTINEZ, *Assistant for Graduate Studies and Professional Development.*

Alanna joined the Graduate School in 2014 and administers TOR benefits, outstanding graduate student awards, and SET. She assists with Graduate Orientation and New GPD Orientation, works with the various graduate scholars groups, and serves as the contact for SIC'EM grants and the TeaCHE capstone course.

CANDICE PROSE, *Assistant to the Dean and Vice Provost.*

Candice has worked at Baylor since 2012. She is responsible for coordinating the Dean's calendar, administering the parental leave benefit, gathering doctoral student publication data and planning the Doctoral Dinner each semester.

ALANA SCHAEPER, *Admissions and Recruitment Specialist.*

Alana is one of the Admissions and Recruitment Specialists for the Graduate School. She is responsible for managing and executing tasks associated with graduate enrollment management. She also attends recruitment events and plays an active role in communicating with prospective graduate students.

LAURA SEPANSKI, *Administrative Associate.*

Laura joined the Graduate School in September 2018 as part of the Graduate Admissions team. She answers inquiries regarding the graduate admissions process, welcomes visitors, and assists with general office operations.

SHERRY SIMS, *Director of the Graduate School Office.*

Sherry has worked in Graduate School since 1981. She serves as the degree planner for all graduate programs and certifies students for graduation. She also works with the administration to implement changes to existing curriculum, policy changes, new degree programs, and new courses. She is also responsible for the Graduate Catalog and making sure all policies and degree plans are included and current.