



The University of Texas MD Anderson Cancer Center  
UTHealth Graduate School of Biomedical Sciences

18 Characteristics of Texas Public Doctoral Programs

December 15, 2021

THE UNIVERSITY OF TEXAS  
**MDAnderson  
Cancer Center**<sup>®</sup>



**UTHealth**<sup>®</sup>  
The University of Texas  
Health Science Center at Houston

**Graduate School of Biomedical Sciences**

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## **Forward**

In January, 2009, the Texas Higher Education Coordinating Board (THECB) created a rule (Section 5.51, *Publishing of Doctoral Program Data*<sup>1</sup>) to implement the Board's adoption of a recommendation from its Graduate Education Advisory Committee (GEAC). The rule requires institutions to provide information regarding 18 Characteristics of Doctoral Programs<sup>2</sup> identified by the GEAC and to publish the information on their websites by December 15 of each year. This data is then to be updated annually. The goal of this rule is to provide the public, including prospective students, employers, policy makers, faculty members and others, with this information for ongoing evaluation and quality improvements.

The 18 Characteristics on which institutions are to report are indicated below and the data for The University of Texas Graduate School of Biomedical Sciences at Houston are found in the body of this report.

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### **<sup>1</sup>Texas Administrative Code**

<u>TITLE 19</u>	EDUCATION
<u>PART 1</u>	TEXAS HIGHER EDUCATION COORDINATING BOARD
<u>CHAPTER 5</u>	RULES APPLYING TO PUBLIC UNIVERSITIES AND HEALTH-RELATED INSTITUTIONS OF HIGHER EDUCATION IN TEXAS
<u>SUBCHAPTER C</u>	APPROVAL OF NEW ACADEMIC PROGRAMS AND ADMINISTRATIVE CHANGES AT PUBLIC UNIVERSITIES, HEALTH-RELATED INSTITUTIONS, AND ASSESSMENT OF EXISTING DEGREE PROGRAMS
Rule §5.51	Publishing of Doctoral Program Data

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Each public university and health-related institution with one or more doctoral programs on its program inventory shall collect and publish information on its website regarding the "18 Characteristics of Doctoral Education" as approved by the Board, on a schedule determined by the Commissioner. Each institution must develop and implement a plan for using the 18 Characteristics for ongoing evaluation and quality improvement of each doctoral program.

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**Source note:** The provisions of this §5.51 adopted to be effective March 2, 2009, 34 TexReg 1421

<sup>2</sup>Programs included only if in existence 3 or more years - program is defined at the 8-digit CIP code level

**1 Number of Degrees per Year**

For each of the three most recent years, average of the number of degrees awarded per academic year

**2 Graduation Rates**

For each of the three most recent years, average of the percent of first-year doctoral students<sup>3</sup> who graduated within ten years

**3 Average Time to Degree**

For each of the three most recent years, average of the graduates' time to degree<sup>4</sup>

**4 Employment Profile (in field within one year of graduation)**

For each of the three most recent years, the number and percent of graduates by year employed, those still seeking employment, and unknown

**5 Admissions Criteria**

Description of admission factors

**6 Percentage Full-Time Students**

FTS<sup>5</sup> / number students enrolled (headcount) for last three fall semesters

**7 Average Institutional Financial Support Provided**

For those receiving financial support, the average monetary institutional support provided per full-time graduate student for the prior year from assistantships, scholarships, stipends, grants, and fellowships (does not include tuition or benefits)

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<sup>3</sup>First-year doctoral students: Those students who have matriculated as doctoral students with a doctoral degree objective

<sup>4</sup>For each academic year, the time to degree is defined as beginning the year students matriculated with a doctoral degree objective until the year they successfully defend their dissertation research

<sup>5</sup>Definition of full-time student (FTS) is institutional by program

**8 Percentage Full-Time Students with Institutional Financial Support**

In the prior year, the number of FTS with at least \$1,000 of annual support/the number of FTS

**9 Number of Core Faculty<sup>6</sup>**

Number of core faculty in the prior year

**10 Student-Core Faculty Ratio**

For each of the three most recent years, average of full-time student equivalent (FTSE) / average of full-time faculty equivalent (FTFE) of core faculty

**11 Core Faculty Publications**

For each of the three most recent years, average of the number of discipline-related refereed papers/publications, books/book chapters, juried creative/performance accomplishments, and notices of discoveries filed/patents issued per core faculty member

**12 Core Faculty External Grants**

For each of the three most recent years, average of the number of core faculty receiving external funds, average external funds per faculty, and total external funds per program per academic year<sup>7</sup>

**13 Faculty Teaching Load**

Total number of semester credit hours in organized teaching courses taught per academic year by core faculty divided by the number of core faculty

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<sup>6</sup>Core Faculty: Full-time tenured and tenure-track faculty who teach 50 percent or more in the doctoral program or other individuals integral to the doctoral program who can direct dissertation research

<sup>7</sup>All external funds received by core faculty from any source including research grants, training grants, gifts from foundations, etc., reported as expenditures

**14 Faculty Diversity**

Core faculty by ethnicity (White, Black, Hispanic, Other) and gender

**15 Student Diversity**

Enrollment headcount by ethnicity (White, Black, Hispanic, Other) and gender

**16 Date of Last External Review**

Date of last formal external review

**17 External Program Accreditation**

Name of body and date of last program accreditation review

**18 Student Publications/Presentations**

For the three most recent years, the number of discipline-related refereed papers/publications, juried creative/performance accomplishments, book chapters, books, and external presentations per year by student FTE

## *Preface*

The University of Texas MD Anderson Cancer Center UTHealth Graduate School of Biomedical Sciences at Houston (GSBS) is operated jointly by two University of Texas components located in the Texas Medical Center in Houston: The University of Texas Health Science Center at Houston and MD Anderson Cancer Center. GSBS doctoral degrees are awarded jointly by these two parent institutions.

Faculty members with primary appointments at one of the schools (i.e., Medicine, Dentistry, Public Health, or Biomedical Informatics) of the UTHealth Science Center (UTHealth), MD Anderson Cancer Center (MDACC), or Texas A&M University Health Science Center Institute for Biosciences and Technology (TAMU-IBT) with appropriate expertise and interest in graduate education are admitted to the GSBS Faculty. Graduate Programs are then organized by the research interests and expertise of faculty members rather than by the departments or operating units in which they hold their appointments at UTHealth or MDACC. Our Programs are thus operated by groups of faculty members from multiple departments at the two parent institutions with common research interests and educational goals.

GSBS reorganized its programs in 2017 and, as a result, some programs are being phased out. Students affiliated with phased-out programs have “informal associations” with current programs so that they have a community of faculty and students with which to interact. For this THECB report, students enrolled in phased-out programs are reported in programs with which they are informally associated. Our current programs listed below:

- Biochemistry and Cell Biology
- Cancer Biology
- Genetics and Epigenetics
- Immunology
- Interdisciplinary Biomedical Sciences
- Medical Physics
- Microbiology and Infectious Diseases
- Neuroscience
- Quantitative Sciences
- Therapeutics and Pharmacology

## **Reporting Notes and Methodology**

**(1) First-Year Students.** First-year students undergo three research tutorials and are not solicited for publications but are counted towards the total headcount of students for all other quantitative measures of the 18 Characteristics reported here.

**(2) Faculty Membership in Multiple Programs.** Since contemporary biomedical sciences are increasingly interdisciplinary, some GSBS faculty members have interests and appropriate credentials in more than one discipline and may thus be members of more than one graduate Program if they agree to participate fully in programmatic instruction and other activities. In cases where an individual is a member of more than one Program, his/her membership, publications, grant funding, and related parameters are reported fully for all Programs in which he/she participates, since he/she has agreed to participate in all affiliated Programs and is thus fully available as an educational resource for students in each Program. Because of this reporting method, the sum of the faculty members in all Programs may differ from the total number of faculty members reported elsewhere and as indicated on our website and in other materials.

For perspective, 61% of our faculty members are affiliated with a single graduate Program (including the Interdisciplinary Biomedical Sciences Program), and 39% with two or more graduate Programs.

**(3) Designation of Core Faculty.** GSBS has two types of faculty appointments: Regular and Associate. Both types of members may participate in didactic teaching, serve on student advisory, supervisory, and examining committees, and offer research tutorials to first-year students. The only difference is that Regular members may serve as the major supervisor for the Ph.D. research project and Associate members may not. Since the Texas Higher Education Coordinating Board (THECB) reporting guidelines define Core Faculty as “individuals integral to the doctoral program who can direct dissertation research,” we have included only our Regular members when reporting the 18 Characteristics in this report.

For perspective, our Regular Members have been 72, 73, and 71% of our total (i.e., Regular plus Associate members) faculty membership over the past three years from which the data in this report are derived. Because of this reporting method, the sum of Core Faculty members reported for our graduate Programs in this report may differ from the *total* numbers (i.e., Regular and Associate members) reported elsewhere.

**(4) M.D./Ph.D. Students.** Reported data do *not* include students receiving the Ph.D. as part of our M.D./Ph.D. Program. For perspective, M.D./Ph.D. students generally comprise approximately 10% of the total GSBS enrollment.

**(5) Designation of Reporting Years/Periods.** Throughout this report, the reporting period/year is indicated for each of the 18 Characteristics as follows:

- Academic Year: Continuous Fall, Spring, and Summer Semesters
- Fiscal Year: September 1<sup>st</sup> – August 31<sup>st</sup> of the following calendar year
- Calendar Year: January 1<sup>st</sup> – December 31<sup>st</sup> of a given year



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## 1. Number of Degrees per Year

The total number of Ph.D. degrees awarded for 2018-2019, 2019-2020 and 2020-2021 academic years were 45, 38 and 56 respectively. The numbers of degrees awarded to students in each of our programs are indicated in Table 1 below.

Table 1

<b>Program</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-2021</b>
Biochemistry and Cell Biology	6	2	3
Cancer Biology	6	8	6
Genetics and Epigenetics	8	3	14
Immunology	4	2	11
Medical Physics	7	7	9
Microbiology and Infectious Diseases	8	3	1
Neuroscience	3	8	1
Quantitative Sciences	2	4	6
Therapeutics and Pharmacology	1	1	5
<b>Total Ph.D. Degrees Awarded</b>	<b>45</b>	<b>38</b>	<b>56</b>

## 2. Graduation Rates

For each of the past three academic years 2018-2019, 2019-2020, and 2020-2021 the percentages of total graduates who received the Ph.D. degree within ten years of first enrolling with a doctoral degree objective were 100% for all three years.

Table 2

<b>Program</b>	<b>Graduation Rate (%)</b>		
	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>
Biochemistry and Cell Biology	100	100	100
Cancer Biology	100	100	100
Genetics and Epigenetics	100	100	100
Immunology	100	100	100
Medical Physics	100	100	100
Microbiology and Infectious Diseases	100	100	100
Neuroscience	100	100	100
Quantitative Sciences	100	100	100
Therapeutics and Pharmacology	100	100	100
<b>Overall Rate for All Graduates</b>	<b>100</b>	<b>100</b>	<b>100</b>

### 3. Average Time-to-Degree

The average time-to-degree for students in each of our programs are provided in Table 3 below. Times do *not* include any leaves of absence for medical or personal reasons. Indicated times were calculated from the start of the first semester in which the student enrolled with a doctoral intent until the student successfully defends his/her dissertation research. Technically, degrees are only awarded at the end of a semester. However, many students complete all degree requirements and begin employment (including postdoctoral positions) before the end of the semester in which they graduated. The number of degrees awarded in each Program for the indicated years is indicated in parentheses.

Table 3

Program	Average Time to Degree in Year		
	2018-19	2019-20	2020-21
Biochemistry and Cell Biology	5.8 (6)	4.8 (2)	5.3 (3)
Cancer Biology	4.9 (6)	5.8 (8)	5.0 (6)
Genetics and Epigenetics	5.9 (8)	4.7 (3)	5.5 (14)
Immunology	5.9 (4)	5.9 (2)	5.4 (11)
Medical Physics	5.1 (7)	4.9 (7)	4.9 (9)
Microbiology and Infectious Diseases	5.6 (8)	4.9 (3)	6.5 (1)
Neuroscience	5.1 (3)	5.2 (8)	4.9 (1)
Quantitative Sciences	4.4 (2)	4.7 (4)	5.4 (6)
Therapeutics and Pharmacology	6.2 (1)	5.7 (1)	6.0 (5)
<b>Average Time for All Graduates</b>	<b>5.5</b>	<b>5.2</b>	<b>5.3</b>

#### 4. Employment Profile

In most cases, employment status in the field of study within the year immediately following graduation was obtained from graduates at the time they completed degree requirements. Students who were uncertain of their impending employment status at the time of graduation were contacted within the following year to obtain their employment status. The employment status in their respective fields within one year of graduation is listed for each of our programs in Table 4 below.

Table 4

Program	2018-19		2019-20		2020-21	
	N	%	N	%	N	%
Biochemistry and Cell Biology	4 <sup>1,1</sup> /6	67	1 <sup>1</sup> /2	-	3/3	100
Cancer Biology	3 <sup>1,1,1</sup> /6	50	5 <sup>2,2,2</sup> /8	100	6/6	100
Genetics and Epigenetics	6 <sup>1,1</sup> /8	75	1 <sup>1,2</sup> /3	67	9 <sup>1,1,1,6,6</sup> /14	64
Immunology	3 <sup>1</sup> /4	75	2 <sup>2</sup> /2	100	6 <sup>1,1,1,1,1</sup> /11	55
Medical Physics	5 <sup>1,1</sup> /7	71	3 <sup>1,2,2,2</sup> /7	86	8 <sup>1</sup> /9	89
Microbiology and Infectious Diseases	7 <sup>4</sup> /8	88	1 <sup>2,2</sup> /3	100	1/1	100
Neuroscience	2 <sup>1</sup> /3	67	4 <sup>1,3,3,3</sup> /8	87	1 <sup>1</sup> /1	0
Quantitative Sciences	2/2	100	1 <sup>1,2,2</sup> /4	75	3 <sup>1,1,1</sup> /6	50
Therapeutics and Pharmacology	1 <sup>1</sup> /1	-	2 <sup>1</sup> /1	100	4 <sup>1</sup> /5	80
<b>All Graduates</b>	<b>32/45</b>	<b>71</b>	<b>32/38</b>	<b>84</b>	<b>42/56</b>	<b>75</b>

<sup>1</sup>Status of unemployed graduate unknown

<sup>2</sup>Graduate employed but in non-discipline-related field

<sup>3</sup>Unemployed graduate seeking employment but still within 1 year of graduation

<sup>4</sup>Graduate unemployed due to medical leave

<sup>5</sup>Graduate currently not seeking employment

<sup>6</sup>Graduate is a continuing student (i.e. seeking medical, or law degree)

(For the number, N, in the above table the denominator indicates the number of Ph.D. degrees awarded in each Program and the numerator indicates the number of graduates employed within the year immediately following graduation. In the great majority of cases students have secured a position by the time they graduate.)

## 5. Admissions Criteria

The basic admissions criteria are the same for all doctoral students. Applicants must have a bachelor's degree or its equivalent from an accredited institution, and all applicants are required to have a solid background in the basic sciences, including basic courses in biology, physics, calculus, and biochemistry.

Undergraduate preparation that includes rigorous upper-level science courses or courses utilizing calculus is preferred. An M.S. degree is *not* required for admission to the Ph.D. programs.

Applicants are generally expected to have a grade point average of at least 3.0 on a scale of 4.0 on all undergraduate and graduate-level work taken previously (particularly in the recommended coursework listed above), although an applicant's GPA is not used as an absolute criterion to either exclude or guarantee admission. For perspective, the average undergraduate GPA of students entering the Ph.D. program in recent years has been 3.5, although there is considerable variation allowed by the GSBS Admissions Committee.

Applicants to the umbrella biomedical sciences MS and PhD programs are not required to take the General Test of the Graduate Record Exam (GRE). However, applicants to the Medical Physics program are required to take the GRE General Test. A Subject Test is not required. Applicants to the programs in Medical Physics typically score at least in the 50<sup>th</sup> percentile on the GRE.

The GSBS Admissions Committee considers each applicant's overall academic record and the factors indicated below in evaluating his/her application for admission:

- Previous research experience and accomplishments, including involvement in research projects and publications, participation in science conferences/meetings, and enrollment in laboratory and research-based courses;
- Expressed commitment to a career involving biomedical research;
- Undergraduate grade point average;
- Performance in undergraduate courses in the biological and physical sciences and mathematics;
- Trends in academic performance;
- Degree of difficulty of undergraduate academic program;
- Previous graduate-level study;
- Honors and awards for academic achievement;
- Performance on the Graduate Record Examinations (applicants to the Medical Physics program only) and for international applicants, the Test of English as a Foreign Language (TOEFL);
- Success in overcoming socio-economic and educational disadvantages;
- Multi-lingual proficiency (for international applicants);
- Non-academic responsibilities, such as employment and parenting;

- Involvement in community activities;
- Race and/or ethnicity

Offers of admission are made based upon the overall consideration of all the above factors rather than on any single metric.

#### 6. Percentage of Full-Time Students

The Graduate School does not allow students to enroll in the Ph.D. program on a part-time basis. The percentage of full-time students was thus 100% for each of our programs for each of the past three years.

## 7. Average Institutional Financial Support Provided

All doctoral students enrolled in each of the Graduate School's programs are appointed as Graduate Research Assistants (GRA's) and receive a stipend, tuition, and medical benefits. All students receive identical stipends and health benefits and full tuition regardless of funding source (e.g., university funds, faculty advisors' research grants, training grants, individual fellowships and scholarships, etc.). For the past three academic years, stipends (*not* including tuition and benefits) provided to all Ph.D. students were:

- 2018-19: \$32,000 per year
- 2019-20: \$32,000 per year
- 2020-21: \$32,000 per year

In addition to stipends provided to all students, GSBS offers a number of competitive financial awards based on academic achievements, research accomplishments, and/or other meritorious achievements. These financial payments/awards are in addition to the standard GRA stipend noted above that all doctoral students receive. In the most recent academic year (2020-2021) the School made such awards to 130 students, ranging from \$300 to \$8,250 with the average amount being \$3,113.

In addition to stipends and achievement awards, the Graduate School awards travel funds to students presenting their research at professional meetings. Last year (2020-2021) the School made travel awards to 28 students totaling \$3,514, with an average award of \$126.

## 8. Percentage of Full-time Students with Institutional Support

In each of the past three academic years, the percentage of full-time doctoral students with at least \$1,000 in institutional support was 100% for our Programs.

## 9. Number of Core Faculty

The numbers of core faculty members in each graduate Program for the past three academic years are presented below in Table 5. Core faculty members are defined as Regular Members of the Graduate School Faculty who can direct dissertation research.

Table 5

<b>Program</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>
Biochemistry and Cell Biology	97	94	91
Cancer Biology	113	106	109
Genetics and Epigenetics	98	99	96
Immunology	60	62	68
Interdisciplinary Biomedical Sciences	10	6	13
Medical Physics	36	36	37
Microbiology and Infectious Diseases	27	26	27
Neuroscience	58	59	60
Quantitative Sciences	64	67	64
Therapeutics and Pharmacology	48	45	46

## 10. Student – Core Faculty Ratio

The ratio of full-time students enrolled (by headcount) to core faculty members (by headcount) in each of our programs is presented below in Table 6 for each of the past three academic years.

The mean student/faculty ratio for all GSBS students and faculty over the past three years is 0.6.

Table 6

<b>Program</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>
Biochemistry and Cell Biology	0.3	0.2	0.3
Cancer Biology	0.5	0.6	0.6
Genetics and Epigenetics	0.5	0.5	0.5
Immunology	0.7	0.8	0.8
Interdisciplinary Biomedical Sciences	0.3	1.8	0.7
Medical Physics	1.0	1.0	1.0
Microbiology and Infectious Diseases	1.0	0.7	0.6
Neuroscience	0.5	0.5	0.4
Quantitative Sciences	0.5	0.6	0.8
Therapeutics and Pharmacology	0.3	0.3	0.3
<b>Overall Ratio (Total Students/Total Faculty)</b>	<b>0.5</b>	<b>0.6</b>	<b>0.6</b>



## 11. Core Faculty Publications

The average numbers of core faculty publications (as defined by the THECB) for each of our programs are presented below in Table 7 for each of the past three calendar years (i.e., January 1<sup>st</sup> – December 31<sup>st</sup>). When viewing results of this nature it should be kept in mind that significant differences may exist between the length of time required to generate the data for publications and presentations in different disciplines, and that no assessment of publications' impact was conducted. Without a much more detailed analysis, including quality assessments, the most valid comparative use of such information is therefore between graduate programs in similar disciplines at other institutions, rather than for comparisons between Programs in different disciplines.

Overall, the average value of core faculty publications as defined by the THECB for GSBS faculty members is 7.2 per faculty member per year for the three years illustrated indicating a high level of faculty research productivity.

Table 7

<b>Program</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>
Biochemistry and Cell Biology	5.2	5.2	5.0
Cancer Biology	8.3	7.6	7.0
Genetics and Epigenetics	6.2	6.0	6.8
Immunology	10.3	7.7	9.7
Interdisciplinary Biomedical Sciences	25.0	7.0	5.0
Medical Physics	7.8	8.4	8.4
Microbiology and Infectious Diseases	4.1	2.6	4.1
Neuroscience	6.0	3.6	5.8
Quantitative Sciences	14.0	15.2	11.3
Therapeutics and Pharmacology	7.2	5.5	7.4
<b>Average Publications for All GSBS Core Faculty</b>	<b>7.8</b>	<b>6.8</b>	<b>7.1</b>

(Values are the averages per core faculty member of the sum of all discipline – related refereed papers, books, book chapters, and notices of discoveries filed/patents for the three indicated years.)

## 12. Core Faculty External Grants

The average number of core faculty receiving external funds, the average external funds per faculty, and the total external funds for each of the past three years for our Programs are provided below in Table 8. Please note that the data in Table 8 is provided as *expenditures* per fiscal year. Figures are total research expenditures per faculty member as defined by the THECB for purposes of this report (i.e., expenditures from research grants, training grants, gifts from foundations, etc., reported as expenditures for research). (Note: N = total number of faculty in each Program and the number in parentheses indicates those with reported research funding/expenditures. Average expenditures/faculty was calculated on the basis of total Program faculty.)

When viewing results of this nature it should be kept in mind that significant differences may exist between the costs of conducting research in various disciplines. Thus, the most appropriate comparative use of this data is between graduate programs in similar disciplines at other institutions, rather than for comparisons between Programs in different disciplines.

Table 8a – FY 2019 (September 1, 2018 – August 31, 2019)

<b>Core Faculty Expenditures by Program for FY '19</b>			
<b>GSBS Program Name</b>	<b>N</b>	<b>Total Expenditures</b>	<b>Average Expenditures/Faculty</b>
Biochemistry and Cell Biology	97 (86)	54,389,329	632,434
Cancer Biology	113 (109)	123,815,898	1,135,926
Genetics and Epigenetics	98 (89)	84,446,411	948,836
Immunology	60 (59)	70,779,787	1,199,657
Interdisciplinary Biomedical Sciences	10 (5)	2,031,780	406,356
Medical Physics	36 (26)	13,329,551	512,675
Microbiology and Infectious Diseases	27 (22)	12,813,510	582,432
Neuroscience	58 (51)	33,660,114	660,002
Quantitative Sciences	64 (60)	39,995,714	666,595
Therapeutics and Pharmacology	48 (44)	40,812,745	927,562
<b>All GSBS Core Faculty</b>	<b>611 (551)</b>	<b>476,074,840</b>	<b>864,019</b>

Table 8b – FY 2020 (September 1, 2019 – August 31, 2020)

<b>Core Faculty Expenditures by Program for FY '20</b>			
<b>GSBS Program Name</b>	<b>N</b>	<b>Total Expenditures</b>	<b>Average Expenditures/Faculty</b>
Biochemistry and Cell Biology	94 (81)	\$54,271,932	\$670,023
Cancer Biology	106 (103)	\$131,012,107	\$1,271,962
Genetics and Epigenetics	99 (94)	\$86,912,810	\$924,604
Immunology	62 (62)	\$70,537,898	\$1,137,708
Interdisciplinary Biomedical Sciences	6 (6)	\$3,100,856	\$516,809
Medical Physics	36 (26)	\$14,022,858	\$539,340
Microbiology and Infectious Diseases	26 (22)	\$12,788,465	\$581,293
Neuroscience	59 (52)	\$33,107,755	\$636,687
Quantitative Sciences	67 (63)	\$43,372,556	\$688,453
Therapeutics and Pharmacology	45 (42)	\$40,860,001	\$972,857
<b>All GSBS Core Faculty</b>	<b>600 (551)</b>	<b>\$489,987,242</b>	<b>\$889,269</b>

Table 8c – FY 2021 (September 1, 2020 – August 31, 2021)

<b>Core Faculty Expenditures by Program for FY '21</b>			
<b>GSBS Program Name</b>	<b>N</b>	<b>Total Expenditures</b>	<b>Average Expenditures/Faculty</b>
Biochemistry and Cell Biology	91 (82)	\$57,725,432.88	\$703,968.69
Cancer Biology	109 (108)	\$141,890,402.81	\$1,313,800.03
Genetics and Epigenetics	96 (92)	\$95,825,568.93	\$1,041,582.27
Immunology	68 (67)	\$77,350,188.15	\$1,154,480.42
Interdisciplinary Biomedical Sciences	13 (10)	\$6,357,707.66	\$635,770.77
Medical Physics	37 (28)	\$11,238,522.96	\$401,375.82
Microbiology and Infectious Diseases	27 (23)	\$11,203,908.82	\$487,126.47
Neuroscience	60 (54)	\$38,093,085.14	\$705,427.50
Quantitative Sciences	64 (59)	\$51,781,780.24	\$877,657.29
Therapeutics and Pharmacology	46 (45)	\$39,544,200.30	\$878,760.01
<b>All GSBS Core Faculty</b>	<b>611 (568)</b>	<b>\$531,010,797.89</b>	<b>\$934,878.17</b>

### 13. Faculty Teaching Load

Faculty teaching loads in organized teaching courses (does *not* include dissertation or other research courses) was calculated by dividing the total number of teaching hours taught by Program faculty by the number of core faculty members (as semester credit hours/core faculty member) for each of our programs and are indicated in Table 9 below for the 2017-2018, 2018-2019, and 2019-2020 academic years.

Table 9

Program	Semester Credit Hours/Core Faculty Member		
	2018-19	2019-20	2020-21
Biochemistry and Cell Biology	3.4	3.7	3.3
Cancer Biology	2.6	2.8	2.7
Genetics and Epigenetics	3.7	3.6	4.2
Immunology	3.3	3.2	3.7
Interdisciplinary Biomedical Sciences	4.8	4.3	4.0
Medical Physics	7.1	6.3	6.3
Microbiology and Infectious Diseases	5.1	4.0	4.5
Neuroscience	3.2	5.0	4.5
Quantitative Sciences	5.6	6.5	7.4
Therapeutics and Pharmacology	3.6	3.4	2.7

### 14. Faculty Diversity

The gender and self-identified ethnicities of core faculty members in each of our Programs are presented in Table 10 below for the 2020-21 academic year.

Table 10a – Faculty Gender

Program	Gender		Total
	Female	Male	
Biochemistry and Cell Biology	24	67	91
Cancer Biology	33	76	109
Genetics and Epigenetics	30	66	96
Immunology	25	43	68
Interdisciplinary Biomedical Sciences	1	12	13
Medical Physics	6	31	37
Microbiology and Infectious Diseases	10	17	27
Neuroscience	14	46	60
Quantitative Sciences	16	48	64
Therapeutics and Pharmacology	15	31	46
<b>Total GSBS Core Faculty</b>	<b>174</b>	<b>437</b>	<b>611</b>

Table 10b – Faculty Ethnicity

Program	White	Black	Asian	Native Hawaiian & other Pacific Islander	American Indian & Alaska Native	Race Unknown	Hispanic	Foreign /Intl
Biochemistry and Cell Biology	48	-	28	-	1	1	1	14
Cancer Biology	53	1	34	-	1	6	4	15
Genetics and Epigenetics	41	-	25	1	-	6	5	26
Immunology	39	-	20	-	-	-	1	5
Interdisciplinary Biomedical Sciences	6	-	4	-	-	-	1	2
Medical Physics	19	-	7	1	-	3	2	8
Microbiology and Infectious Diseases	16	1	5	-	-	1	1	5
Neuroscience	30	-	12	-	-	2	2	13
Quantitative Sciences	24	1	18	-	-	3	2	20
Therapeutics and Pharmacology	17	1	20	-	-	1	-	6
<b>Grand Total:</b>	<b>293</b>	<b>4</b>	<b>173</b>	<b>2</b>	<b>2</b>	<b>23</b>	<b>19</b>	<b>114</b>

*Faculty may be reported under multiple racial categories*

## 5. Student Diversity

The gender and self-identified ethnicities of enrolled full-time doctoral students in each of our programs are presented in Table 11 below for the 2020-2021 academic year.

Table 11a – Student Gender

Program	F	M	Total
Biochemistry and Cell Biology	13	10	23
Cancer Biology	43	24	67
Genetics and Epigenetics	31	15	46
Immunology	29	22	51
Interdisciplinary Biomedical Sciences	7	2	9
Medical Physics	15	22	37
Microbiology and Infectious Diseases	14	3	17
Neuroscience	15	11	26
Quantitative Sciences	25	23	48
Therapeutics and Pharmacology	10	5	15
<b>Total GSBS Students</b>	<b>202</b>	<b>137</b>	<b>339</b>

Table 11b – Student Ethnicity

Program	White	Black	Asian	Native Hawaiian & other Pacific Islander	American Indian & Alaska Native	Race Unknown	Hispanic	Foreign/ Intl.
Biochemistry and Cell Biology	11	-	2	-	1	2	4	8
Cancer Biology	16	5	5	-	-	1	6	42
Genetics and Epigenetics	17	3	5	-	2	3	4	19
Immunology	13	2	5	-	1	3	3	30
Interdisciplinary Biomedical Sciences	4	2	1	-	-	-	-	4
Medical Physics	22	1	1	-	1	1	5	12
Microbiology and Infectious Diseases	4	4	1	-	1	3	3	5
Neuroscience	13	1	1	-	1	2	4	9
Quantitative Sciences	7	-	3	-	-	2	2	36
Therapeutics and Pharmacology	8	1	1	-	1	2	4	3
<b>Grand Total</b>	<b>115</b>	<b>19</b>	<b>25</b>	<b>-</b>	<b>8</b>	<b>19</b>	<b>35</b>	<b>168</b>

*Students may be reported under multiple racial categories*

16. Date of Last External Review AND 17. External Program Accreditation

Our Medical Physics Program undergoes accreditation every five years by the Commission on Accreditation of Medical Physics Education Programs, Inc. (CAMPEP). In the most recent review conducted in April, 2018, the Program received full accreditation through December, 2023.

Our other doctoral Programs do not undergo external review by individual disciplinary accrediting boards. They are accredited as part of institutional accreditation of our parent institutions, The University of Texas Health Science Center at Houston and MD Anderson Cancer Center, by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC). Initial SACSCOC accreditation is awarded for five years and full reaccreditation then occurs every ten years with abbreviated, interim five-year reviews.

The University of Texas Health Science Center at Houston and the University of Texas MD Anderson Cancer Center received full reaccreditation by SACSCOC in 2021.

## 18. Student Publications/Presentations

The average number of publications and presentations/per student (as defined by the THECB) for each of our programs is provided in Table 12 for calendar years 2018, 2019, and 2020. When viewing results of this nature it should be kept in mind that significant differences may exist between the length of time required to generate the data for publications and presentations in different disciplines and that no attempt was made to assess the impact rating of various publications. Without a more detailed analysis, including quality measures of publications, the most valid comparative use of such information is therefore between graduate programs in similar disciplines at other institutions, and less so for comparisons between Programs in different disciplines. Overall, the average number of publications/presentations for all GSBS students in 2020 is 1.9 per year indicating that students are highly successful at publishing their graduate research.

Table 12

Program	Mean Number		
	2018	2019	2020
Biochemistry and Cell Biology	3.1	1.2	2.1
Cancer Biology	3.4	1.4	1.6
Genetics and Epigenetics	2.3	1.5	1.7
Immunology	4.1	2.4	2.8
Medical Physics	2.2	4.8	4.5
Microbiology and Infectious Diseases	2	2.0	1.7
Neuroscience	2.5	1.9	1.4
Quantitative Sciences	2.4	2.2	1.3
Therapeutics and Pharmacology	2.2	1.7	0.6
<b>Average for All GSBS Students</b>	<b>2.7</b>	<b>1.9</b>	<b>1.9</b>

*The mean number is the sum of discipline-related referred papers and publications, books, book chapters, and external presentations divided by the number [headcount] of current students and graduates who responded to the survey.*