

Appendix - August 13-14, 2020 Regular Board of Regents Meeting

UNT SYSTEM ACRONYM LIST

UNTS Acronym List - Page 2

STUDENT SUCCESS, ACADEMIC AND CLINICAL AFFAIRS COMMITTEE

New UNT PhD Program Proposal

UNT PhD in Biomedical Engineering THECB Proposal - Page 6

Quality Academic Measures

UNT Student Access & Success Measures - Page 58

UNT Academic Quality Measures - Page 59

UNT Research Measures - Page 60

UNT Dallas Student Access & Success Measures - Page 61

UNT Dallas Academic Quality Measures - Page 62

UNTHSC Student Access & Success Measures - Page 63

Quality Academic Measures Definitions - Page 64

Audit and Finance Committee

Executive Summary of Internal Audit

Executive Summary of IA Briefing - Page 67

IA Executive Summary - Page 68

Q3 Compliance Report

UNTS Q3 FY20 Consolidation Compliance Report - Page 70

Q3 FY20 Consolidated Compliance Report - Page 72

UNT System Acronym List

ACT	American College Testing: a standardized test used for college admissions
ASF	Assignable Square Feet
AUX	Auxiliary Reserves
BOR	Board of Regents
BSC	Business Service Center
BSS	Business Support Services
CAE	Chief Audit Executive
CAFR	Comprehensive Annual Financial Report
CIA	Chief Internal Auditor
CIP	Capital Improvement Plan
CIP	Construction in Progress
CM	Construction Manager
CMAR	Construction Manager at Risk
CO	Change Order
COL	College of Law
CP	Commercial Paper
DEI	Diversity, Equity and Inclusion
FTE	Full Time Equivalent: generally used in reference to Full Time Student Equivalent (FTSE) but can also be used in reference to Full Time Faculty Equivalent (FTFE). See FTSE or FTFE below for definitions.
FTIC	First Time in College: a student who has never enrolled in a college or university. Students who have earned college credits only through dual credit courses are still considered FTIC.

FTSE	Full Time Student Equivalent: is computed by dividing headcount enrollment by a set number of semester credit hours based on the rank of the student (Undergraduate FTSE = 15 SCH; Masters and Special Professional FTSE = 12 SCH; Doctoral FTSE = 9 SCH). FTSE is generally lower than headcount enrollment because of part time students.
FTFE	Full Time Faculty Equivalent: a measure of instructional faculty calculated from the percent of time directly related to teaching.
FY	Fiscal Year
GAI	General Academic Institution
GMAT	Graduate Management Admission Test: a standardized test for admission into graduate programs of business schools.
GME	Graduate Medical Education: clinical training following graduation from medical school leading to specialty certification. Texas, like most states, requires one year of graduate medical education to be eligible for state licensure. Also called residency training.
GSF	Gross Square Feet
HEAF	Higher Education Assistance Fund (also known as HEF)
HERRF	Higher Education Emergency Relief Fund
HR	Housing Reserve
HR	Human Resources
HRI	Health-Related Institution
HSC	Health Science Center
HUB	Historically Underutilized Business
IA	Internal Audit
LAR	Legislative Appropriations Request
MCAT	Medical College Admission Test: a standardized test for admission into medical school
MP	Master Plan

OBS	Office of the Board Secretary
OGC	Office of General Counsel
OGCA	Office of Grants & Contract Administration
OFPC	Office of Facilities Planning and Construction
P3	Public-Private Partnership (also known as PPP)
PM	Project Manager
PP	Private Placement
PUF	Permanent University Fund: a sovereign wealth fund created by the State of Texas to support higher education at the University of Texas System and Texas A&M System, but not other public higher education systems or institutions in Texas
PSAT	Preliminary Scholastic Aptitude Test: used to prepare high school students who plan to take the SAT for admission to college. (See SAT below)
QEP	Quality Enhancement Plan: required for reaffirmation of accreditation by SACSCOC. The QEP describes a carefully designed and focused course of action that addresses a well-defined topic or issue(s) related to enhancing student learning.
RB	Revenue Bonds
RFP	Request for Proposal
RFQ	Request for Qualifications
RFS	Revenue Financing System Bonds
RPTC	Reappointment, Promotion, and Tenure Committee
RR	Regents Rules
SACS	Southern Association of Colleges and Schools: a shortened abbreviation for “SACSCOC.” (See below).
SACSCOC	Southern Association of Colleges and Schools Commission on Colleges: the recognized regional accrediting body for institutions of higher education that award associate, baccalaureate, masters or doctoral degrees in eleven U.S. Southern states.

SAT	Scholastic Aptitude Test: A standardized test for college admissions.
SCH	Semester Credit Hour: the unit of measuring educational credit, usually based on the number of classroom/instructional hours per week throughout a term.
SF	Student Fees
SF	Square Feet
SFP	Statement of Financial Position
SRECNP	Statement of Revenues, Expenses and Changes in Net Position
STEM	Science, Technology, Engineering and Math
TAMS	Texas Academy of Mathematics and Science: the nation's first early college entrance residential program for gifted high school aged students
THC	Texas Historical Commission
THECB	Texas Higher Education Coordinating Board: a nine member board appointed by the Governor that provides coordination of higher education in Texas and was created by the Texas Legislature in 1965.
TRB	Tuition Revenue Bond
T/TT	Tenured/Tenure Track Faculty: faculty who hold the ranks of assistant professor, associate professor, and professor prior to or after the awarding of tenure.
VC	Vice Chancellor



Texas Higher Education Coordinating Board
Texas Public Universities and Health-Related Institutions

Proposal for a New Doctoral Program

Directions: Texas public universities and health-related institutions complete this form to propose a new doctoral degree program. This form requires signatures of (1) the Chief Executive Officer, certifying adequacy of funding for the new program; (2) the Chief Executive Officer, acknowledging agreement to reimburse expert external reviewers' costs; (3) the Chief Financial Officer, certifying the accuracy of funding estimates for the new program; (4) a member of the Board of Regents (or designee), certifying Board of Regents approval for Coordinating Board consideration; or, if applicable, (5) a member of the Board of Regents (or designee), certifying that criteria have been met for Commissioner consideration. Institution officials should also refer to [Texas Administrative Code \(TAC\), Title 19, Chapter 5, Subchapter C, Section 5.46](#), *Criteria for New Doctoral Programs*.

Note: An institution must submit Planning Notification prior to submitting a proposal for a new doctoral program. An institution is considered by the Board to be planning for a new doctoral program if it takes any action that leads to the preparation of a proposal for a new program. This includes hiring personnel, including consultants and planning deans, leasing and/or purchasing real estate, building facilities, and/or developing curriculum. Planning Notification must be submitted at least one year prior to submission of a proposal to offer the degree, if the proposed program leads to the award of a professional degree, as defined by [Texas Education Code 61.306](#). Institutions submit Planning Notification through the online submission portal, as a letter to the Assistant Commissioner of the Academic Division of Academic Quality and Workforce.

Contact: Division of Academic Quality and Workforce, 512-427-6200.

Administrative Information

1. Institution Name and Coordinating Board Accountability Group:

University of North Texas; Emerging Research Group

2. Proposed Program:

Show how the proposed program would appear on the institution's Program Inventory (e.g., Doctor of Philosophy in Electrical Engineering).

Doctor of Philosophy in Biomedical Engineering

3. Proposed CIP Code:

List of CIP Codes may be accessed online at www.txhighereddata.org/Interactive/CIP/. Include justification if the proposed program name is not included in the Texas Classification of Instructional Programs.

14.0501.00

4. Location and Delivery of the Proposed Program:

Provide the location of instruction and how the proposed program will be delivered to students (e.g., Instructed on the main campus in Lubbock, face-to-face).

Instructed at the main campus in Denton, face-to-face.

5. Administrative Unit:

Identify where the proposed program would fit within the organizational structure of the institution (e.g., Department of Electrical Engineering within the College of Engineering).

Department of Biomedical Engineering within the College of Engineering

6. Program Description:

Describe the proposed program.

The University of North Texas (UNT) seeks approval for a Ph.D. program in Biomedical Engineering (BMEN) to produce multi-faceted, new Ph.D. graduates who will fulfill unmet healthcare-related, startup industry needs in the North Texas area specifically and the state of Texas in general. The proposed degree program is aligned with UNT's strategic plan to retain its Carnegie R1 Research University status in the coming years.

The educational objectives of this Ph.D. program are twofold: 1) to prepare Ph.D. graduates to conduct and continue research into new unexplored fields that can revolutionize the healthcare-technology sector; and 2) to educate Ph.D. students in business knowledge, innovation, and technology transfer to enable them to create new and disruptive healthcare startups that will improve the quality of life for the people of Texas, the U.S. and the world. Students will have the option of choosing one of two tracks: 1) a traditional research track that enables them to get a graduate minor in another engineering or computer science or biology or performance arts health (music in medicine), with the added feature of organized training to teach after graduation; (2) a healthcare startup track that enables the students to take 4 courses in business, allied to startup management with a specialist-taught translational technology course. To further support the technology innovation aspect in the new Ph.D. program, at least one member of every Ph.D. dissertation committee (second track) will be required to be an industrial expert in the relevant field. The BMEN department aims to educate our Ph.D. students to become innovators of high-tech healthcare ventures of the future, which will increase the visibility of the DFW region, Texas, and the Nation, through technology translation, entrepreneurial endeavors and most importantly, job creation.

The State of Texas is the second largest state in the country in terms of population and gross domestic product (GDP). However, in 2017 the number of Ph.D. graduates in BMEN for Texas was 77. Comparatively, the numbers for California, New York and Massachusetts are 166, 81 and 74, respectively. Similarly, Texas ranks as the most business-friendly state (CNBC-2018), but does not feature in the top ranked US states by large and specialized employment in medical devices and equipment. The top 3 states are California, Minnesota and Massachusetts, respectively. The only Texas city that features in the list of most active (investments) metro areas in digital health industry in 2018 is Austin (ranked 8th). For a

state and a region (DFW) that is flourishing economically and has 3 universities ranked in Carnegie Tier 1 classification, the number of Ph.D. graduates in Biomedical Engineering and the number of investable start-up companies in healthcare are comparatively low. The proposed BMEN Ph.D. program aims to contribute talented Ph.D. graduates to reduce the shortfall and enable translation of innovative doctoral research into viable and successful startup companies in order to sustain economic growth in the DFW region and the State of Texas.

The proposed Ph.D. program will complement other existing programs in DFW and Texas. In addition to the unique program component of technology transfer and entrepreneurship, the new Ph.D. program will focus on the following research areas in biomedical engineering: nanotechnology, biomaterials, biosensors and neuroengineering. The growing BMEN faculty have demonstrated an excellent body of scholarly work in these areas, including competitive funding and are well aligned with the needs of industry and federal as well as government research institutions.

The department of Biomedical Engineering commenced its graduate programs in 2017. The M.S. Biomedical Engineering program has grown to 34 students in 2.5 years. Also in 2017, the Ph.D. degrees in Materials Science and Engineering; Mechanical and Energy Engineering and Electrical Engineering, respectively, were offered with a concentration in Biomedical Engineering. Ten Ph.D. students were admitted to these programs. Since then, the faculty of Biomedical Engineering have been co-advising Ph.D. students in these departments, and have already graduated one of them with another student set to graduate in May 2020. The graduated student is currently employed as a post-doctoral researcher. This year, 8 more students have expressed an interest in pursuing a Ph.D. in one of the aforementioned degrees with a concentration in Biomedical Engineering. Despite the apparent success of this temporary solution, an independent Ph.D. program in Biomedical Engineering is strongly needed to address the issues relating to specialization and technology translation.

The BMEN department was developed with a spirit of innovation and emphasis on breadth and depth of knowledge. The department has implemented an innovative biomedical engineering curriculum oriented to industrial preparation as well as preparation for graduate studies. Our students obtain a Bachelor's degree in biomedical engineering and also get 2 minors: one in mathematics and the other in another engineering discipline, computer science, or biology. Our M.S. students also get a graduate minor in another engineering discipline, computer science, biology, or business management. The Ph.D. degree is a natural development in this educational progression for the BMEN department, which has grown to enrollments of 234 undergraduate students (47% women) and 36 Master's students in 5 years, and a total of almost \$1M extramural research funds. The biomedical engineering department is now housed in a brand new 26,000 square foot building with state-of-the-art research and teaching laboratories. A new Ph.D. degree in biomedical engineering will not only help produce more doctoral students with greater diversity, but will also help the department retain its talented faculty and attract additional high-quality faculty to provide our students with outstanding teaching and securing additional extramural funding for cutting edge research. The students coming out of this new program are expected to create innovative startups that will enhance the ranking of the DFW region and Texas in healthcare initiatives.

7. Proposed Implementation Date:

Provide the date that students would enter the proposed program (MM/DD/YYYY).

08/01/2021

8. Institutional and Department Contacts:

Provide contact information for the person(s) responsible for addressing any questions related to the proposal.

1. Name: Elizabeth Vogt

Title: Assistant Vice Provost

E-mail: Elizabeth.Vogt@unt.edu

Phone: 469-263-3284

2. Name: Dr. Vijay Vaidyanathan

Title: Founding Chair, Biomedical Engineering

E-mail: vijay.vaidyanathan@unt.edu

Phone: 940-565-3268

Proposed Doctoral Program Information

I. Need

A. Job Market Need

Demonstrating the need for additional graduates in the field is vital. Provide short- and long-term evidence of the need for graduates in the Texas and U.S. job markets. Cite the Bureau of Labor Statistics, Texas Workforce Commission, professional association data, and other documented data sources to create a supply/demand analysis. Institutions should be able to show how the number of new graduates produced both in Texas and nationally compares to the number of job openings that require a doctoral degree in the discipline now and in the future on both the state and national levels. The use of predictive modeling is encouraged. If the program is designed to address particular regional or state needs in addition to workforce demands, provide a detailed description.

Among the goals identified in the Texas Workforce Commission's Strategic Plan for the period, 2019-2023 are to support a workforce system that allows employers and workers to achieve and sustain economic prosperity; prepare individuals for employment by supporting education and training that equips them with in-demand skills as identified by employers. The proposed Ph.D. degree in Biomedical Engineering at UNT seeks to support the achievement of the TWC goals by incorporating innovation and technology translation. This will be accomplished by not only filling job needs, but also by innovating and creating new jobs, thus taking the success of the biomedical engineering job cluster in Texas to national and international visibility.

The proposed Ph.D. program in biomedical engineering would seek to address the needs of the state and nation in the following ways:

- Advanced technologies and manufacturing: addressed through research and teaching in nanotechnology lab on chip and biosensors, including applications of AI.
- Aerospace: biomedical engineers and their expertise will play a vital role as NASA and private companies plan interstellar trips to space. Biomedical engineers with a versatile skill-set would be needed to keep the astronauts sane and healthy over long periods of travel time.
- Biotechnology and life sciences: biomedical engineers with a doctoral education that encompasses innovation and technology transfer can create startups that can change the face of healthcare and health monitoring in the DFW region and Texas. The enhancement in healthcare technology in areas such as biotechnology through the use of advanced techniques such as nanotechnology and biomaterials can help the citizens of Texas lead healthier and better lives, bringing down healthcare administrative costs.

Obtaining a Ph.D. degree through rigorous and innovative original research is characteristic of all doctoral programs in engineering. When novel research is tied to implications regarding the health of human beings and involves procedures and technologies that improve quality of life, then the research assumes added significance. Thus, when a doctoral program in biomedical engineering also offers its students the opportunity to learn to start a business emanating from original, innovative research, then that doctoral program has the potential to create and sustain the

economy of a region, state and the nation. We seek to fulfill this need by creating the proposed Ph.D. program in biomedical engineering.

According to the 2018 Small Business Profile, released by the US Small Business Administration Office of Advocacy, there are 30.2 million small businesses (less than 500 employees) in the US, employing 58.9 million people. 99.9% of US businesses are small business enterprises, employing 47.5% of US employees. Small businesses form the pulse of the nation. Startups form an important part of small business enterprise. Statistics (Small Business Trends, *Startup*, March 2019) indicate that only 4% of small business owners have a doctoral degree. It has been shown that two of the main reasons for failure of startups are: not addressing market need and not being at the right location. Innovating technologies for improving health and quality of life are not going to suffer from lack of need. Texas is the number one state to start a new business and the DFW region, with three Tier 1 universities, is the perfect place to start a business and grow it. According to the Texas Workforce Report for 2018-19, if Texas were a nation, it would rank as the 10th largest economy in the world based on GDP, ahead of Russia, Canada, Mexico and many others. Texas also led all states in terms of seasonally adjusted annual job growth by adding 323,300 jobs from July 2018 to July 2019, which equaled a strong 2.6 percent annual growth rate. Thus, the Texas labor market outperformed the nation for 29 consecutive months, reaching an all-time low seasonally adjusted unemployment rate of 3.4 percent for June and July of 2019.

With continued strong job opportunities in many parts of Texas, the state has attracted many people from throughout the world and nation. Texas' population added 379,128 new residents from 2017 to 2018 according to the U.S. Census Bureau. According to the Texas Demographer's Office, Texas will add another 5 million new residents by 2028, all of whom will put new demand on goods and services. For Texas to continue to lead in economic output, it must continue to embrace new technologies that employers are adding to their production processes. Texas must train for the skills of tomorrow to remain competitive in a global marketplace. This was also clearly stated by the Perryman report in 2010, wherein he states in order to have a substantial positive effect on Texas' economy, Texas would need to cement its position as a center of growth by enhancing the state's pool of engineers. In evaluating scenarios for Texas to be competitive with California and Massachusetts in terms of per capita output in emerging industries or per capita performance in emerging sectors, Texas would need to produce an additional 17,000 – 32,000 qualified engineers by 2035. Healthcare and life science related industry is an important and integral part of that future workforce. In order to grow companies that create and sustain that workforce, strong technological expertise in biomedical engineering is needed. In a report published by the Milken Institute in 2011, entitled, "The Global Biomedical Industry: preserving US leadership," the authors state that the US accounted for more than 16% of the world's medical device exports in 2006-2009, but also point out that emerging nations are beginning to gain a foothold in the market. The authors recommend that other cities need to follow the example of Minneapolis to establish medical clusters comprising startups, established companies, research institutions and universities. The authors also recommend increasing R&D tax incentives; cutting corporate taxes and extending support for biomedical research fields by promoting and expanding the role of universities. The proposed Ph.D. program in biomedical engineering at UNT addresses the need for research growth and also provides human capital with knowledge and innovation to create healthcare startups in the DFW region, thus enabling it to play a significant role in empowering Texas and USA to maintain leadership role in the biomedical industry.

The Biomedical Engineering department is well placed to address the need of the job market. The department was started in 2014 with a bachelor's program in biomedical engineering. The unique feature of the curriculum with 6 tracks of study, has been that graduates of the program obtain a major in biomedical engineering and two minors – one in mathematics and the 2nd minor in another engineering discipline or computer science or biology, depending on the chosen track. Thus, the graduates of the program have the breadth and depth of knowledge to be successful in their professional life. The BS program has grown to 234 students with a diverse population and 47% of the student body being women. There have been 50 graduates from the BS program in the last 2 years. Our graduates are employed in diverse companies such as Alcon, Abbott, Lockheed Martin, etc. The graduate program in biomedical engineering commenced in 2017 and had a similar feature – students graduate with a M.S. in biomedical engineering and can obtain a graduate minor in an engineering discipline or computer science or biology or management or health administration. Thus, our degrees are structured to provide maximum impact for students as they embark on their professional lives in today's highly competitive job market. In two years, the M.S. program has grown to 36 students with 8 graduates. The graduates are working in companies such as Boston Scientific and Orthofix. In 2017, the Ph.D. degrees in Materials Science and Engineering, Mechanical and Energy Engineering and Electrical Engineering, respectively, were offered with a concentration in Biomedical Engineering. Ten Ph.D. students were admitted to these programs. The faculty of Biomedical Engineering co-advise the Ph.D. students in these departments, and have already graduated one Ph.D. student, with another student set to graduate in May 2020. The graduated student is currently employed as a post-doctoral researcher.

The department has grown to seven full-time faculty and two joint appointees. In addition, the department has an adjunct faculty from the UNT Health Science Center in Fort Worth, who teaches the undergraduate and graduate courses in Biomechanics and also participates actively in research committees. Currently, the department is conducting a faculty search to hire two more faculty. In June 2019, the department moved into its own building. The 26,000 square feet building is an addition to the existing 550,000 square feet UNT Discovery Park. The new building houses three open-concept wet labs with fume hoods, biosafety cabinets and separate rooms within, for microscopy and cell cultures. In addition, the building also houses a teaching laboratory, a senior design maker space and 3 modern classrooms. We feel confident in our capability to develop a new doctoral program with a productive emphasis on cutting edge research and entrepreneurship.

Long-term Need

The US Department of Labor projects that employment of biomedical engineers will grow by 4% from 2018-2028. Biomedical engineers likely will see employment growth because of increasing possibilities brought by new technologies and increasing applications to medical equipment and devices. For Texas, the long-term occupational projection for biomedical engineers is 12% for the period 2016-2026 [<https://projectionscentral.com/Projections>].

The State of Texas is the second largest state in the country in terms of population and gross domestic product (GDP). However, in 2017-18 the number of Ph.D. graduates in BMEN per 1 million population for Texas was 2.72, the lowest among the top ten states for Ph.D. graduates

that year. As shown in Figure 1, the top four are Massachusetts (10.79), Maryland (8.1), North Carolina (4.53) and California (4.2)¹. These statistics show that Texas needs to increase its BMEN Ph.D. production to be on par with the other states shown in the figure.

The shortfall in the DFW metroplex is also pronounced when compared to other high-tech metro areas in the country. Figure 2 shows the comparison between the urban areas. Again, Texas or DFW comes in last. The pool of available engineering talent is a major determinant of economic growth and potential. Whether it is creating innovative, disruptive startups that can change the face of healthcare or employing qualified researchers in established companies, availability of qualified biomedical engineers is critical. The proposed, new BMEN Ph.D. program would be in an excellent position to work with local institutions to contribute more Ph.D. students to address the shortfall and enable a *sustainable* economic growth in the DFW region and the State of Texas.

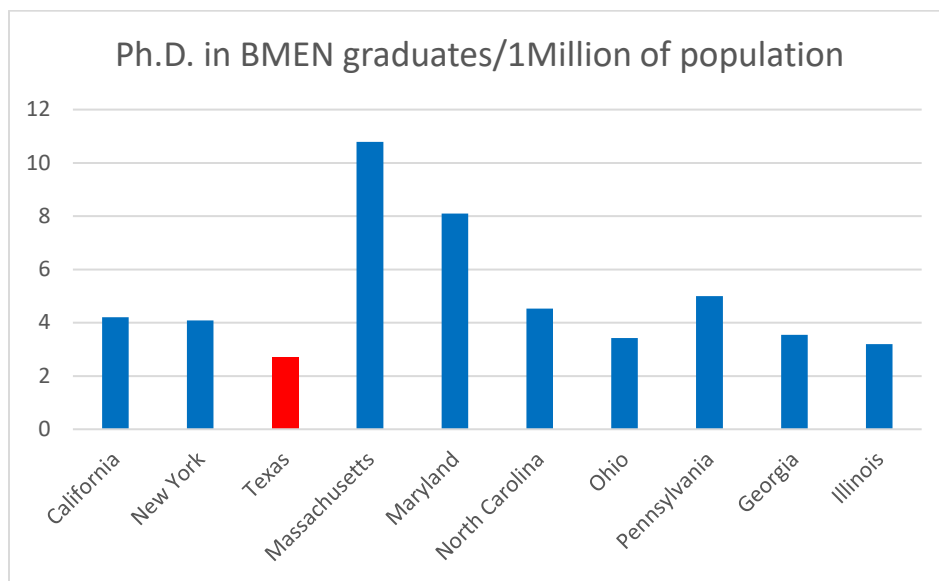


Figure 1 Number of BMEN Ph.D. graduates per 1 Million population for the top 10 states in 2017-18

¹ Source: National Science Foundation and United States Census Bureau.

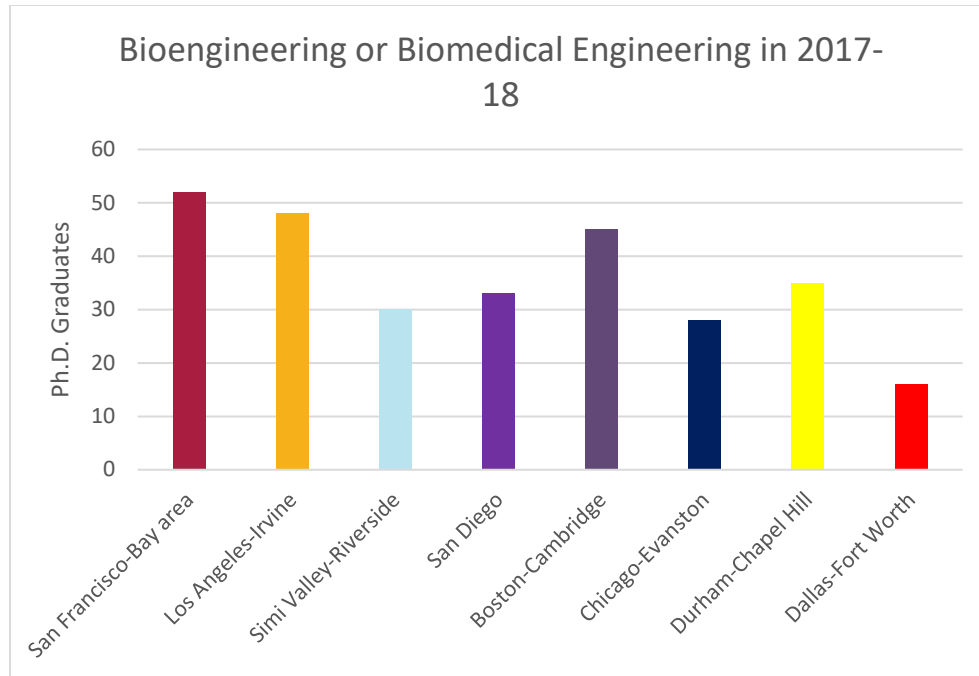


Figure 2 Comparison of Ph.D. BMEN graduates in major metroplexes in 2017-18

The Ph.D. program is also strongly needed in Texas to improve the State’s ability to attract innovative and competitive research funding. Texas, compared to other states such as California, is behind in federal research funding. The National Institutes of Health (NIH) invests nearly \$37.3 billion annually in medical research. More than 80% of the funding is awarded through nearly 50,000 competitive grants to more than 300,000 researchers at more than 2500 universities, medical schools, and other research institutions in every U.S. state and around the world. Among the 26 states with at least one institution among the top 50 listed here, California and Massachusetts lead the nation, with seven institutions in each state receiving NIH grant funding. Next-highest is New York with five NIH-funded institutions. These three states combined account for more than one-third (19) of the top 50 NIH-funded institutions in the current 2018 federal fiscal year. Those states were followed by eight states with two institutions each (Illinois, Maryland, Minnesota, North Carolina, Ohio, Pennsylvania, Texas, and Washington state). The level of competitive (peer-reviewed) federal funding obtained by an institution or state is one commonly used metric to measure progress on scientific discovery and innovations. While there are various reasons for Texas to be in this unfavorable situation, lack of universities with top tier Ph.D. programs is one critical factor.

In 2009 the Texas State legislature passed House Bill 51 to establish incentives and benchmarks for emerging research universities. As one of the seven emerging research universities in the state of Texas, UNT set a clear research strategic goal to significantly increase its research and expand technology transfer. UNT now is a Carnegie classified Tier 1 Research University and has maintained that status for the past 3 years. In the 10-year, two-step strategic plan, UNT reallocated resources from programs of low-productivity and created new doctoral programs in

targeted STEM areas. Ph.D. programs were added to electrical engineering and mechanical and energy engineering at UNT as part of the strategic plan. The proposed Ph.D. program in Biomedical Engineering is part of that initiative and will contribute strongly to UNT's strategic plan and address H.B. 51 by attracting competitive funding in the areas of biomaterials, biotechnology, nanotechnology and biosensors, among other areas of biomedical engineering.

Short-term Need

Current employment: Figure 3 summarizes employment status for holders of the Ph.D. in Biomedical Engineering, according to the latest Survey of Doctorate Recipients conducted by the National Science Foundation in 2017². Note from the figure that only 1.61% were unemployed, while the national unemployment was many times higher. It is also worth noting in Figure 4, that Biomedical Engineering had the *highest*, full time employment percentage (93.17%) among all engineering occupations such as electrical, aerospace/aeronautical/astronautical, chemical, civil/architectural/sanitary, materials/metallurgical, mechanical, and other engineering areas.

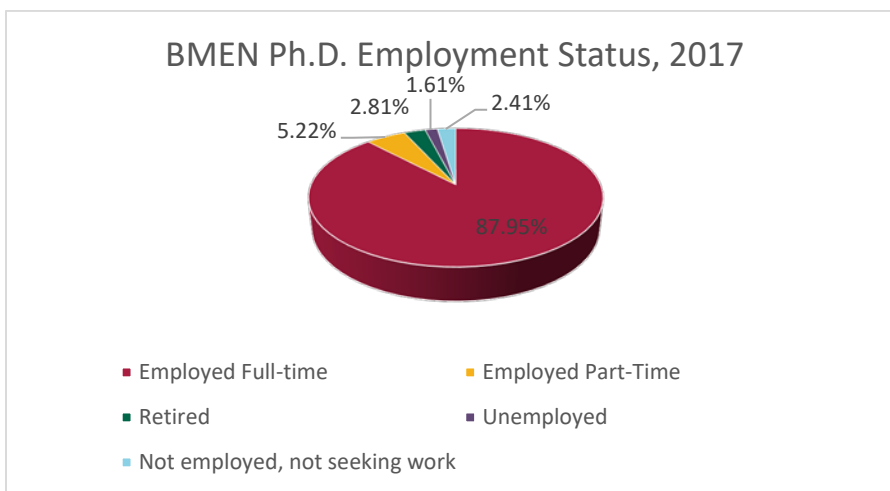


Figure 3 Employment status of BMEN Ph.D. from the 2017-18 Survey of Doctorate Recipients

For Texas, the short-term occupational growth projection for biomedical engineers is 4.4% for the period 2018-2020 [<https://projectionscentral.com/Projections>]. On November 21, 2019, a search conducted on indeed.com with the keywords, "biomedical engineering Ph.D.", yielded 934 jobs (nationwide). Some examples of job titles are: post-doctoral researcher/scholar; tenure-track faculty; lecturer; engineer; staff engineer; scientist/senior scientist; research scientist, etc. The list of organizations included private companies such as Johnson & Johnson, Regeneron, Lockheed Martin, state universities, private universities, hospitals, research institutions, consulting companies etc. The search yielded 10 results when the location was specified as Dallas. A similar search on glassdoor.com, yielded 651 results nationwide and 11 in

Dallas. A search conducted on LinkedIn yielded 1000 results nationwide and 14 in the Dallas area. The results show that there are job opportunities available throughout the nation for graduates with a doctorate in biomedical engineering. There is an urgent need for rapid expansion and growth of healthcare related enterprises in the form of relocating companies and growth of innovative startups in the DFW region, fueled by graduates with original and path breaking research backgrounds.

Engineers are critical to competitive economic growth and a primary factor in capturing emerging technology sectors. Hence, the State of Texas has committed substantial resources and efforts such as the CPRIT program, Texas Research Incentive Program, the National Research University Fund, the Emerging Technology Fund, the STARS program, the Enterprise Fund, and Project Emmitt. However, as shown in Figures 1 and 2, both Texas and the DFW region are substantially under-producing biomedical engineering doctorates, especially considering their size of economies and population.

In addition to producing employees for companies and creating startups, biomedical engineers with doctoral degrees from UNT can work with NASA and private space agencies as they seek to take human beings to Mars and beyond. Health and well-being of astronauts assumes added significance as they embark on these path breaking, long journeys. Highly skilled and qualified biomedical engineers need to work closely with mission control to ensure that astronauts remain healthy, fit and stable to perform the tasks expected of them.

Need for Biomedical Engineering Entrepreneurship

By 2026, the number of uninsured Americans will climb to 23 million, according to CBO analysis. There arises the prospect of millions of people searching for low-priced, pay as you go health services. This potential shift in the dynamics of demand for large segments of the population would come as hospitals and major health practices work with insurers to push towards value-based care, furthering the need for low-cost service options, and as the supply of healthcare providers, relative to demand, is dwindling, particularly in rural, lower-income regions³. Healthcare innovation can provide the prescription for this problem. In this context, the Ph.D. in Biomedical Engineering with emphasis on start-up management can kick start innovative solutions to this problem that can alleviate administration pains for Texas and the nation.

The landscape of innovation and entrepreneurship programs in medical schools in the US is rapidly expanding to address newfound skills needed by physicians to tackle ongoing changes in healthcare⁴. There are more than a dozen programs in allopathic medical schools in the country. UT Austin's Dell Medical School is one of them. Biomedical engineering curricula need to adapt to this and ensure that they are working in step with healthcare needs and innovative

³ L. Achan, (2017) "Affordable healthcare requires entrepreneurship" Becker's Hospital CFO report <https://www.beckershospitalreview.com/finance/affordable-healthcare-requires-entrepreneurship.html>

⁴ B.A. Niccum, A. Sarker, S.J. Wolf, M.J. Towbridge, (2017)" Innovation and entrepreneurship programs in US medical education: a landscape review and thematic analysis", [Med Educ Online](#). 2017; 22(1): 1360722.

medical schools. Thus, there is a need for a Ph.D. program that incorporates business creation skills in its doctoral studies.

In January 2019⁵, it was reported that Texas overtook California as the No. 1 state for female entrepreneurs. Given that UNT Biomedical Engineering has a female student population of 47%, the Ph.D. in Biomedical Engineering with emphasis on start-up management provides an optimum pathway for female students to continue on and explore the growing area of healthcare startups, thus increasing the number of female entrepreneurs in Texas.

Critical conditions surrounding current healthcare practices⁶, call for more radical innovation and empowerment of patients. This is possible only with programs that marry technical excellence with a spirit of innovation. UNT's proposed Ph.D. program aims to do just that to create niche markets that will lead to innovative and experimental treatments that will eventually benefit a large segment of the population in Texas and the USA.

The infrastructure for healthcare innovation in Texas is already in place. Medical construction is part of the booming construction taking place across Texas. The \$15.8 billion medical construction pipeline is second in the nation and provides added impetus for researchers and entrepreneurs to form creative partnerships in finding innovative solutions to healthcare issues involving providers.

Healthcare weekly listed the 31 best healthcare startups to watch in 2019. The list is dominated by companies from the bay area and NY. No Texas Company makes the list. This is particularly true for startups in health technology. There is a desperate need for Texas to produce high-impact health technology and drug discovery startups. While Ph.D. programs have been successful in educating engineers focused on academic or corporate research careers, they have not typically delivered the skills needed for graduates to launch and succeed at startup companies. The proposed biomedical engineering Ph.D. program could play a significant role in fulfilling that need.

Biomedical engineering plays a significant role in the lives of all human beings. It has transcended the usual roles attributed to biomedical engineering such as hospital engineer or field engineer, to engineering that can change humanity with techniques such as CRISPR Cas-9, AI and nanotechnology, while still retaining its traditional roots. The biomedical engineering department at UNT is devoted to producing versatile engineers who graduate with a major in biomedical engineering and one or more minors. This underlying philosophy has been carried over to the M.S. program and is now an integral part of the proposed Ph.D. in biomedical engineering. By offering two tracks for the students, the department seeks to produce biomedical engineers who can work in industry, academia and research institutions, as well those who are entrepreneurs and can take their innovative doctoral research and turn it into a startup company that could

⁵ D. Difurio. (2019). "The No. 1 state for female entrepreneurs isn't tech-centric California – it's Texas." Dallas Morning News. <https://www.dallasnews.com/business/business/2019/01/15/texas-no-1-us-forfemale-entrepreneurs-new-study>

⁶ N. Colin & A. Zins, (2015) "Why entrepreneurship is harder in healthcare and how we can make it easier", <https://salon.thefamily.co/why-entrepreneurship-is-harder-in-healthcare-and-how-we-can-make-it-easier-d53dd94d94c1>

potentially serve as the engine for job growth and technological advancement in the DFW region and Texas.

B. Existing Programs

The information provided indicates knowledge of existing programs in Texas and of high-ranking programs nationally. This section provides an understanding of program duplication, capacity, and quality. Identify all existing degree programs in the state, include those specific to the region and major programs at peer institutions across the nation. Peer institutions have similar missions, doctoral-research/scholarship programs, and research expenditures. Peer institutions include, but are not limited to, out-of-state peer groups identified in the Coordinating Board's Accountability System.

Identify the existing programs and their locations in Texas. Provide enrollments and graduates of these programs for the last five years, and explain how the proposed program would not unnecessarily duplicate existing or similar programs in Texas. Provide evidence that existing Texas programs are at or near capacity and describe how the existing programs are not meeting current workforce needs. Provide the job placement of existing Texas programs.

Include an assessment of capacity to accept additional students in existing Texas programs. One indicator of capacity is the faculty-to-student ratio in existing programs in the discipline. Another indicator is the number of students admitted to a program in comparison to the number of qualified applicants.

Table B-1 identifies the Ph.D. programs in biomedical engineering in the DFW region, Texas and prominent biomedical Ph.D. programs around the nation. Table B-1 also provides 5-year graduation statistics for these institutions. It is evident that the DFW region and Texas as a state lag behind in the production of biomedical engineering Ph.D. graduates when compared to prominent institutions around the country.

Table B-1: 5-year graduation statistics for Ph.D. granting universities in Texas and USA

Institutions	2014	2015	2016	2017	2018
UT Dallas	0	5	10	7	3
UT Arlington	7	4	8	6	8
UT San Antonio	3	5	3	5	5
Rice University	14	11	27	15	17
Texas A&M University	16	14	12	16	13
University of Houston	3	6	3	6	5
UT El Paso	1	0	0	2	0
UT Austin	13	21	10	9	5
Texas Tech University	N.A.	N.A.	N.A.	2	0
Other institutions around US:					
Johns Hopkins University	23	36	29	39	31
Duke University	20	27	31	29	23
Stanford	16	N.A.	N.A.	13	15

MIT	37	39	38	33	40
Georgia Institute of Technology	45	28	36	36	40

Table B-2 addresses the number of US citizen Ph.D. graduates from universities in DFW and Texas as compared to those from other prominent institutions in the country for the year 2018. Just to put the statistics in perspective – just two universities - Duke University and Johns Hopkins University, graduated as many US citizen Ph.D. graduates in biomedical engineering as all institutions in Texas.

Table B-2: US citizen Ph.D. graduates in 2018 from Texas and the USA

Institutions	US Citizen BMEN-Ph.D. in 2018
UT Dallas	2
UT Arlington	1
UT San Antonio	3
Rice University	12
Texas A&M University	11
University of Houston	3
UT El Paso	0
UT Austin	5
Texas Tech University	0
Other institutions around US:	
Johns Hopkins University	20
Duke University	17
Stanford	15
MIT	28
Georgia Institute of Technology	22

C. Student Demand

Provide short- and long-term evidence of student demand for the proposed program. Types of data commonly used to demonstrate this include increased enrollment in related and feeder programs at the institution, high enrollment in similar programs at other institutions, qualified applicants rejected at similar programs in the state, and student surveys (if used, include data collection and analysis methods). Surveying students currently enrolled in feeder programs provides limited data about actual student demand. Information that demonstrates student interest includes the development of a student interest group. Provide documentation that qualified applicants are leaving Texas for similar programs in other states.

Student demand:

The biomedical engineering department at UNT is 5 years old. The department started as an undergraduate program in fall 2014 and has grown to 240 undergraduate students in fall 2019. The MS program was started in fall 2017 and in 2 years has grown to 34 students. In fall 2017, the department also worked with existing Ph.D. programs in electrical engineering, mechanical and energy engineering and materials science and engineering to start concentrations in biomedical engineering. In its first year, the program had 9 students and currently has 12 students pursuing this option. Rapid growth in existing programs in biomedical engineering argues well for a full-fledged, dedicated Ph.D. program in biomedical engineering. Ph.D. programs in electrical engineering, mechanical and energy engineering and materials science and engineering, have all shown a positive growth trend in the last 3 years. Locally, in the DFW area, American Society for Engineering Education (ASEE) data shows that Ph.D. enrollment in biomedical engineering has increased by 157% at UTD; 30% at UTA; 52.5% at University of Houston and 37.5% at the University of Texas. Correspondingly, the faculty increases have been at 25%, 27%, 45% and 10.5%, respectively. As is evidenced by tables B-1 and B-2, other prominent biomedical engineering departments in the nation (such as the ones listed in tables B-1, B-2) have been maintaining their large growth. These universities are able to offer doctoral students' other options that attract students from states including Texas. Creation of a new Ph.D. program in biomedical engineering at UNT with two tracks, including one delivering education and expertise in startup management, will attract more students from Texas to stay and pursue a Ph.D. at UNT, leading to a growth of healthcare startups and job growth.

In a survey of existing M.S. (34) and Ph.D. (10) concentration students in the department of biomedical engineering, more than 75% of M.S. students and 95% of Ph.D. concentration students expressed an interest in a program such as the one proposed here. Over the last 3 years, the department has lost Ph.D. students whose main interest was biomedical engineering and did not want to pursue a Ph.D. in another field. Having our own Ph.D. program would bring in such students while retaining the ones who want to pursue a Ph.D. in EE/ME/Materials with a concentration in biomedical engineering. Similarly, 46 undergraduate seniors were surveyed and 100% of those who expressed an interest in pursuing graduate studies and obtaining a Ph.D. degree in biomedical engineering preferred the proposed Ph.D. program in biomedical engineering over others. With our rapid growth in enrollment of BS and M.S. students, especially with female students, we are very confident of enrolling and graduating high-quality doctoral students from our proposed Ph.D. program.

D. Student Recruitment

Plans to recruit students are realistic and based on evidence of student demand and unmet need in similar programs in Texas. Indicate if the proposed program and its discipline are projected to have a special attraction for students of a particular population. Be specific about efforts to recruit students from underrepresented groups.

The department of biomedical engineering is implementing several recruitment strategies to recruit and retain students including those from underrepresented groups:

- The College of Engineering has a dedicated graduate recruiter who has been responsible for recruiting M.S. and Ph.D. students to our programs. The department

chair works with her to participate in recruiting events on a regular basis. Recruiting events include presentations and graduate fairs at institutions that have only undergraduate and/or M.S. degrees. Through this process, the college has managed to recruit many students into its graduate programs, including biomedical engineering and will continue to do so to recruit BMEN Ph.D. students.

- UNT's B.S. in Biomedical Engineering program has 240 undergraduates enrolled in Fall 2019, a cohort which provides a large pipeline for our graduate programs. To recruit outstanding UNT undergraduates into the graduate program, the department offers an accelerated graduate-track program, i.e., B.S. and M.S. in biomedical engineering in 5 years. In the first year of starting this program, there were four students enrolled in the program. One of the four students has committed to continuing at UNT for his Ph.D. program in electrical engineering with a concentration in biomedical engineering. In fall 2019, eight students enrolled in the grad-track program. These students are potential Ph.D. students for the program. Every effort will be made to recruit these students into the new Ph.D. program.
- Biomedical Engineering graduate programs at UNT – M.S. and Ph.D. in Electrical/Mechanical/Materials Science with concentration in biomedical engineering, are just 2 years old. In this period, the M.S. program has grown to 34 students and there are 10 students in the biomedical engineering concentration of existing Ph.D. programs. The rapid growth of our graduate program portrays a positive trend for sustained growth of the proposed Ph.D. program in biomedical engineering.
- The biomedical engineering department has an excellent track record in recruiting female students and minorities. Currently, the undergraduate population is 47% female. Similarly, the graduate enrollment is 29% female. The department will endeavor to maintain and increase female population at the graduate level by attracting more females to the proposed Ph.D. program. The BMEN department is very diverse: **the total student population comprises 31% Hispanic and 14% African-American students in fall 2019.** The program will conduct active recruitment of students from Hispanic-Serving Institutions (HSI), and Historically Black Colleges and Universities (HBCUs), and through the Society of Women Engineers (SWE) and the National Society of Black Engineers (NSBE).
- We have been identifying top undergraduate students for graduate study by encouraging undergraduate research with biomedical engineering faculty. We will endeavor to continue this trend and encourage the research active undergraduates to pursue a Ph.D. in biomedical engineering.
- UNT has shown an increase in enrollment of National Merit Scholars. The department of biomedical engineering is home to many of these students. The department will chart out an accelerated path to Ph.D. for these students. Currently, 3 outstanding students from the department are completing their degree in 3 years and have chosen to stay back in the M.S. program in biomedical engineering for their fourth year.

In addition to research assistantships offered by its faculty, the department of biomedical engineering also offers 6 teaching assistant positions to its existing M.S. and Ph.D. concentration students. Graduate students can also work as graders or tutors for the department. The College of Engineering and the Toulouse Graduate School of UNT have been very supportive in recruiting bright new BMEN graduate students by offering them competitive scholarships and assistantships at the college and university level, respectively.

E. Enrollment Projections

Enrollment projections are realistic and based on demonstrable student demand. Projections take into account student attrition, graduation rates, and part-time students. Attrition calculations should be based upon the average rates of related supporting graduate programs at the institution, if available.

Complete Table 1 to show the estimated cumulative headcount and full-time student equivalent (FTSE) enrollment for the first five years of the proposed program, including the ethnic breakdown of the projected enrollment (White, African American, Hispanic, International, Other). Include summer enrollments, if relevant, in the same year as fall enrollments. Subtract students as necessary for projected graduations or attrition. Provide explanations of how headcounts, FTSE numbers, projections for underrepresented students, and attrition were determined. Define full-time and part-time status.

Table 1. Enrollment Projections

	Year 1	Year 2	Year 3	Year 4	Year 5
White	4	5	6	7	8
African American	1	2	3	3	4
Hispanic	1	2	3	3	4
International	3	5	7	8	10
Other	1	1	2	2	2
Total New Students	10	6	8	6	11
Attrition	1	2	2	2	3
Cumulative Headcount	9	13	19	21	25
FTSE	9	13	19	21	25
Graduates	0	0	2	4	8

II. Academics

A. Accreditation

If the discipline has a national accrediting body, describe plans and timeline to obtain accreditation. For disciplines where licensure of graduates is necessary for employment, such as clinical psychology, plans for accreditation are required. If the program will not seek accreditation, provide a detailed rationale. If doctoral-level accreditation is not available but is projected to become so within the next five years, include that information. It is not necessary to provide copies of the accreditation criteria.

The University of North Texas is accredited by the Southern Association of Colleges and Schools, Commission on Colleges (SACSCOC). For graduate programs in engineering, there is no discipline specific accreditation. Undergraduate engineering programs are accredited by ABET. At the undergraduate level, the department of Biomedical Engineering had its first ABET accreditation visit in fall 2019.

B. Admissions Standards

Admissions standards are set to admit the most qualified students through a rigorous and competitive process. Standards are appropriate for the discipline. Standards are set

to ensure full enrollment, as projected in the proposal, and will allow the program to become nationally recognized.

Describe the institution's general graduate admissions standards and the program-specific admissions standards for applicants of the proposed program. The description addresses how the proposed program will seek to become nationally competitive. Provide specific information about minimum grade point averages, standardized test score, and TOEFL iBT score requirements. Explain how students will be assessed for readiness to enroll in program coursework. Include any policies for accepting students transferring from other graduate programs. Explain whether the proposed program will accept full-time and part-time students.

Students seeking admission to the doctoral program in biomedical engineering must meet all general requirements for doctoral candidates at UNT and must have completed a 4-year bachelor's degree or a 2-year M.S. degree. Additional requirements include:

1. Graduate Record Examination (GRE) scores;
2. Official transcripts from each college or university attended;
3. Three letters of recommendation from professors or employers;
4. A personal statement that highlights aspects of the applicant's background and his or her career plans;
5. An acceptable score on either the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS) for applicants whose native language is not English.

A holistic evaluation of the students' credentials will be used as a basis for admission. The Graduate Admission Committee of the Department of Biomedical Engineering will review all applications for graduate study and make decisions on admissions based on holistic considerations of all information provided by the applicants. Standardized test scores and coursework GPA levels are listed for advisory purposes only, to indicate the typical achievement levels of students enrolled and succeeding in the various programs. No single quantitative or qualitative measure or any specific combination thereof, constitutes a definitive standard for admission. Rather, each application will be considered individually and each applicant's complete profile of strength and prospects for successful completion of the program will be evaluated.

On the basis of previous experience with applicants for the doctoral degree in other departments in the college, it is expected that typical scores for successful applicants are a 3.5 GPA (on 4-point scale) in prior course work, a GRE verbal of 150, and GRE quantitative of 160. If applicable, TOEFL scores of 79 (Internet-based test), 550 (paper-based test), or IELTS 6.5. Students whose preparation is deficient in some respects will be required to take leveling or prerequisite courses.

C. Program Degree Requirements

Describe the similarities and differences between the proposed program and peer programs in Texas and nationally. Indicate the different credit hour and curricular requirements, if any, for students entering with a bachelor's degree and students entering with a master's degree. Minimum semester credit hours should be comparable

to peer programs. Texas Education Code 61.059 (I) limits institutions from receiving formula funding for doctoral students who have taken more than 99 total semester credit hours. Provide a justification if the program requires more than 60 semester credit hours beyond the master's degree or 90 hours beyond the baccalaureate. Acceptable justifications may include licensure or accreditation requirements.

Complete Table 2 to show the degree requirements of the proposed program. If requirements vary for students entering with a master's degree or comparable qualifications, provide an explanation. Modify the table as needed. If necessary, replicate the table to show more than one option.

Table 2.1: Semester Credit Hour Requirements by Category for Traditional Ph.D. Track

Category	SCH Entering with a Bachelor's	SCH Entering with a Master's
Required Courses	9	8
Prescribed Electives	15	9
Electives	9	9
Dissertation	12 (minimum)	12 (minimum)
Other (Specify, e.g., internships, clinical work, residencies)	Individual Research - 6	Individual Research - 3
TOTAL¹	51 (minimum)	41 (minimum)

¹Texas Education Code 61.059 (I) limits funding for doctoral students to 99 SCH. Programs may be allowed to require additional SCH, if there is a compelling academic reason.

Table 2.2: Semester Credit Hour Requirements by Category for Ph.D. with Startup Management track

Category	SCH Entering with a Bachelor's	SCH Entering with a Master's
Required Courses	9	8
Prescribed Electives	15	9
Electives	12 (from College of Business)	12 (from College of Business)
Dissertation	12 (minimum)	12 (minimum)
Other (Specify, e.g., internships, clinical work, residencies)	Individual Research - 6	Individual Research - 3
TOTAL¹	54 (minimum)	44 (minimum)

¹Texas Education Code 61.059 (I) limits funding for doctoral students to 99 SCH. Programs may be allowed to require additional SCH, if there is a compelling academic reason.

Complete Table 3 to provide a comparison of the proposed program to existing and/or similar programs in Texas in terms of total required semester credit hours (SCH). Modify the table as needed.

Table 3. Semester Credit Hour Requirements of Similar Programs in Texas

Institution	Program CIP Code	Degree Program	SCH, Entering with a Bachelor's	SCH Entering with a Master's
University of Texas at Arlington	14 .0501 .00	Ph.D.	47	38
University of Texas at Dallas	14 .0501 .00	Ph.D.	75	27
Texas A&M University	14 .0501 .00	Ph.D.	96/64	64

University of Texas	14 .0501 .00	Ph.D.	26 SCH of coursework + dissertation	26 SCH of coursework + dissertation
University of Houston	14 .0501 .00	Ph.D.	84	54

D. Curriculum

Describe the educational objectives of the proposed program. For the description of educational objectives, distinguish between aspects of the curriculum that are standard for the field and aspects that would be unique to the proposed program.

If the proposed program has a unique focus or niche, describe it in relationship to peer programs. Indicate how the niche or specialties of the proposed program are appropriate for the job market and student demand, and describe how they complement other peer programs in the state (or nation, if relevant).

Describe how the proposed program would achieve national prominence. Indicate if the proposed program is designed to have a particular regional focus.

Provide an explanation of required, prescribed, and elective courses and how they fulfill program requirements.

Describe policies for transfer of credit, course credit by examination, credit for professional experience, placing out of courses, and any accelerated advancement to candidacy. Provide a plan that would allow a student entering with relevant work experience to rapidly progress through the program or provide an explanation why this would not apply.

Identify any alternative learning strategies, such as competency-based education, that may increase efficiency in student progress in the curriculum. If no such policies are in place to improve student progression through a program, provide an explanation.

Complete Tables 4, 5, and 6 to list the required/core courses, prescribed elective courses, and elective courses of the proposed program and semester credit hours (SCH). Note with an asterisk (*) courses that would be added if the proposed program is approved. Modify the tables as needed. If applicable, replicate the tables for different tracks/options.

The educational objectives of the proposed Ph.D. program in Biomedical Engineering:

- 1) to prepare Ph.D. graduates to conduct research, innovate and realize solutions in existing as well as new areas that will ultimately improve the quality of life for people in USA and the world
- 2) to educate Ph.D. students on translating innovative research into a novel and successful startup company that will create more high-tech jobs and opportunities in Texas and USA.

Existing doctoral programs in biomedical engineering focus on engineering and science only and prepare Ph.D. students for careers in academia and research institutions such as national laboratories. Our Ph.D. degree has two tracks that address both needs - in addition to rigorous studies in science and engineering, teaches students the skills necessary to become entrepreneurs, and to transform high impact research into inventions and businesses. We believe that our degree fills a vacuum in higher education in Texas, by establishing an entrepreneurially oriented doctoral program with emphasis on innovation and technology transfer.

The proposed program would achieve national prominence by conducting research into novel and emerging areas of biomedical engineering such as AI in healthcare; nanotechnology; cancer theranostics; advanced biotechnology, etc. By hiring faculty with research experience in these areas, we will give our students knowledge and experience in these fields and the opportunity to conduct and translate their research into innovative startups.

An explanation of required, prescribed, and elective courses and how they fulfill program requirements:

1) Ph.D. Track geared towards research and academia:

Students embarking on this doctoral program will have a variety of sub-tracks or options to choose. Students can choose any one of the following sub-tracks:

- a) Biomaterials
- b) Bioinstrumentation
- c) Biomechanics
- d) Biocomputing
- e) Biotechnology
- f) Music in Medicine

Accordingly, students may choose their electives (any 3 graduate level courses) from one of the following: Materials Science and Engineering (MTSE) for Biomaterials track; Electrical Engineering (EE) for Bioinstrumentation track; Mechanical Engineering (MEEN) for Biomechanics track; Computer Science (CS) for Biocomputing track; Biology (BIOL) for Biotechnology track; Performance Arts Health (MUPH) from the College of Music for the Music in Medicine track. UNT's College of Music is world renowned and includes research in performance arts health. Biomedical Engineering and the College of Music have collaborated on graduate student theses and several senior design projects. There is considerable interest from funding agencies on exploring alternative therapies. In this regard, the track of Music in Medicine will be a unique feature of the proposed Ph.D. program. Thus, students will get a graduate minor in any of these disciplines, in addition to their Ph.D. degree. The graduate minor will enable students to gain a depth of knowledge in their area of research. In addition, students will be required to take a course in Instructional Service or Teaching Practicum, that will prepare them for curriculum development and teaching courses in an effective manner.

2) Ph.D. Track geared towards start-up management:

Students embarking on this doctoral program will have the unique opportunity to take their innovative research and spin it off into a start-up company. Doctoral students will take relevant courses pertaining to creating and running a start-up company from the G. Brint Ryan College

of Business. The courses will provide them with the knowledge and foundation necessary to embark on the path of entrepreneurship. In addition, students will be required to take a course in Translational Biomedical Engineering that will prepare them on various aspects of translating their research into a start-up company.

Students may be allowed to take a Special Problems course, where their competency in solving a particular problem, will be assessed. Special Problems may be taken in lieu of an organized course. However, only one special problems course will be permitted for each student.

Table 4.1. Required/Core Courses (including dissertation and individual research) for Traditional Ph.D. Track after B.S. degree

Prefix and Number	Required/Core Course Title	SCH
BMEN 5940	Graduate Seminar	1
BMEN 6940	Doctoral Seminar	2
BMEN 6920	Instructional Service	3
BMEN 5310/5321/5320/5280/5313	Focus area course in one of: Bioinstrumentation/Biomaterials/Biomechanics/Biocomputing/Biotechnology	3
BMEN 6910	Individual Research	6
BMEN 6950	Dissertation	12 min

Table 4.2. Required/Core Courses (including dissertation and individual research) for Traditional Ph.D. Track after M.S. degree

Prefix and Number	Required/Core Course Title	SCH
BMEN 6940	Doctoral Seminar	2
BMEN 6920	Instructional Service	3
BMEN 5310/5321/5320/5280/5313	Focus area course in one of: Bioinstrumentation/Biomaterials/Biomechanics/Biocomputing/Biotechnology	3
BMEN 6910	Individual Research	3
BMEN 6950	Dissertation	12 min

Table 4.3. Required/Core Courses (including dissertation and individual research) for Startup Management Ph.D. Track after B.S. degree

Prefix and Number	Required/Core Course Title	SCH
-------------------	----------------------------	-----

BMEN 5940	Graduate Seminar	1
BMEN 6940	Doctoral Seminar	2
BMEN 6930*	Translational Biomedical Engineering	3
BMEN 5310/5321/5320/ 5280/5313	Focus area course in one of: Bioinstrumentation/Biomaterials/Biomechanics/Biocomputing/Biotechnology	3
BMEN 6910	Individual Research	6
BMEN 6950	Dissertation	12 min

Table 4.4. Required/Core Courses (including dissertation and individual research) for Startup Management Ph.D. Track after M.S. degree

Prefix and Number	Required/Core Course Title	SCH
BMEN 6940	Doctoral Seminar	2
BMEN 6930*	Translational Biomedical Engineering	3
BMEN 5310/5321/5320/ 5280/5313	Focus area course in one of: Bioinstrumentation/Biomaterials/Biomechanics/Biocomputing/Biotechnology	3
BMEN 6910	Individual Research	3
BMEN 6950	Dissertation	12 min

Table 5. Prescribed Elective Courses from Biomedical Engineering for both Ph.D. tracks: **15 SCH after B.S. degree; 9 SCH after M.S. degree**

Prefix and Number	Prescribed Elective Course Title	SCH
BMEN 5005	Neuroengineering	3
BMEN 5007	Research methods in Biomedical Engineering	3
BMEN 5210	Biomedical Engineering laboratory	2
BMEN 5280	AI for wearables and healthcare	3
BMEN 5310	Clinical Instrumentation	3
BMEN 5311*	Rehabilitation Engineering	3
BMEN 5312*	Advanced Signal Processing in Biomedical Engineering	3
BMEN 5313	Bioengineering of Cellular Systems	3
BMEN 5314	Advanced Tissue Engineering and Regenerative Medicine	3
BMEN 5315	Computational Methods in Biomedical Engineering	3
BMEN 5316	Biopolymers	3
BMEN 5317	Advanced Biotechnology	3
BMEN 5318	Biomedical Implants	3
BMEN 5319	Cardiovascular fluid dynamics	3
BMEN 5320	Advanced Biomechanics	3
BMEN 5321	Biomaterials Compatibility	3
BMEN 5322	Medical Imaging	3
BMEN 5323*	Advanced Biomedical Optics	3
BMEN 5324	Applications of Biomedical MEMS	3

BMEN 5325	Nanotechnology	3
BMEN 5700*	Introduction to statistical genetics	3
BMEN 5800	Topics in Biomedical Engineering	3
BMEN 6800	Advanced Topics in Biomedical Engineering	3

*BMEN 5700 is cross-listed with a MATH graduate course (MATH 5700) of the same title, taught by faculty from the Math department.

Table 6.1. Examples of Four Elective Courses in business* for Ph.D. with start-up management track

Prefix and Number	Elective Course Title	SCH
ACCT 5020	Accumulation and analysis of accounting data	3
MGMT 5300	Entrepreneurship and venture management	3
MKTG 5150	Marketing Management	3
MGMT 5140	Organizational Behavior and Analysis	3

*Students can take any 4 elective courses from the College of Business with permission of graduate advisor

Table 6.2. Three Elective Courses for traditional Ph.D. track to be taken from one of the following:

Prefix	Elective Courses	SCH
EENG	3 graduate courses from department of Electrical Engineering	9
MTSE	3 graduate courses from department of Materials Science and Engineering	9
MEEN	3 graduate courses from department of Mechanical Engineering	9
CSCE	3 graduate courses from department of Computer Science and Computer Engineering	9
BIOL	3 graduate courses from Biology	9
MUPH	3 graduate courses from College of Music Performance Arts Health	9

E. Candidacy and Dissertation

If the proposed program requires a dissertation, describe the process leading to candidacy and completion of the dissertation. Describe policies related to dissertation hours, such as a requirement to enroll in a certain number of dissertation hours each semester. If there is no dissertation required, describe the summative activities leading to the degree. Indicate if a master's degree or other certification is awarded to students who leave the program after completing the coursework, but before the dissertation defense.

In addition to satisfying the general requirements for all UNT doctoral degrees and the course requirements, each Ph.D. student must satisfactorily complete the following:

- The Residence Requirement: consisting of two consecutive terms/semesters of enrollment in at least 9 credit hours, or 3 consecutive terms of enrollment in at least 6 credit hours.
- Ph.D. Committee Formation: The committee should have at least 3 members from within the BMEN Department, and at least 1 member from outside the BMEN Department. Students on the startup track may have an additional member from industry.

- **Ph.D. Qualifying Requirement:** A student shall complete with a grade of B or higher all the core courses. An oral exam will be conducted by the student's Ph.D. committee to assure the research readiness of the candidate.
- **Dissertation Proposal Defense:** An oral presentation of a detailed research plan. The research plan is distributed to the committee well in advance and an examination announcement will be distributed for interested graduate faculty and students.

Dissertation Defense: Upon completion, the dissertation is to be distributed to the committee members at least 4 weeks prior to the final examination date. The candidate will prepare a formal presentation of their dissertation research and results to be defended during an oral exam.

F. Delivery Modes, Use of Distance Technologies, and Delivery of Instruction

If an institution is offering more than 50 percent of its proposed program via distance education modality, the Learning Technology Advisory Committee will also review the proposed program. It is expected that if an institution offers *any* portion of its program via distance education that it will have sufficient technology resources to deliver doctoral-level education from a distance without sacrificing quality. Provide documentation that the distance education options are appropriate for the course content and built into the curriculum accordingly.

The Ph.D. program is proposed to be implemented using face-to-face instruction at the Discovery Park location of the main campus in Denton, Texas. No distance methods are planned at this time. In emergency situations, the department may need to employ other technologies (e.g. Zoom) to complete instruction.

G. Program Evaluation

Describe how the proposed program will be evaluated. Describe any reviews that would be required by an accreditor, and show how the proposed program would be evaluated under [Board Rule 5.52](#).

Describe procedures for evaluation of the program and its effectiveness in the first five years of the program, including admission and retention rates, program outcomes assessments, placement of graduates, changes of job market need/demand, ex-student/graduate surveys, or other procedures.

Describe how evaluations would be carried out. Describe how the results of evaluation would be used to improve distance delivery.

The institution's *Characteristics of Doctoral Programs* are current. Describe the plan for using the *Characteristics of Doctoral Programs* for ongoing evaluation of the proposed program and quality improvement. Include the link to the institution's designated website for existing doctoral programs.

The University of North Texas conducts periodic reviews of all academic degree programs in order to promote academic quality and productivity and to assure alignment with the mission

of the institution. The BMEN doctoral program and other existing programs will be reviewed in the context of an overall department review. The Office of University Accreditation is responsible for coordinating the graduate program review process. The office maintains the review schedule, provides the standard reporting formant and data, structures the review process, maintains records of the outcomes, and monitors relevant follow-up.

The University of North Texas has a rigorous process of student learning outcomes assessment. The Improve database (formerly called TracDat) was adopted in 2008 as the university wide database for collection and storage of academic and administrative assessment plans. Improve is used by the BMEN department as a tool to assure the educational quality and improve the effectiveness of its academic programs. In addition, the program will review the data collected for the 18 Characteristics of Texas Doctoral Programs.

The new PhD program will be reviewed as part of the THECB's Graduate Program Review along with the Master's. The review is scheduled to take place in 2026. A review team that consists of both internal and external (to UNT) members will review the departmental self-study, and visit the UNT Discovery Park and main campus in Denton, Texas. They will provide an assessment of the program following the Coordinating Board's guidelines for the periodic review of graduate programs.

The THECB also has a mandatory 5-year long, annual evaluation cycle for new Ph.D. programs. Towards that end, the College of Engineering has established a robust process of annually evaluating Ph.D. students' attainment of learning outcomes and progress towards their degree. The outcomes will be tracked on Improve. The Biomedical Engineering department will also conduct an exit interview for all graduates to collect information of job placements, initial salaries, program satisfaction etc. These processes provide feedback to the academic unit to make sure expected outcomes are met and to further improve student learning.

H. Strategic Plan and Marketable Skills

Describe how the proposed doctoral program fits into the institution's overall strategic plan, and provide the web link to the institution's strategic plan.

Describe how the proposed program will align with the state's *60x30TX plan*, and address the goals related to completion, marketable skills, and student debt. Specifically identify the marketable skills the students will attain through the proposed program. Explain how students will be informed of the marketable skills included in the proposed program.

Explain how the proposed program builds on and expands the institution's existing recognized strengths.

The goals of UNT's [strategic plan](#) encompass student empowerment and transformation by increasing best practice curricular experiences for students. Establishment of the proposed Ph.D. program in biomedical engineering, with a traditional track as well as one emphasizing startup management, will offer students high-quality curricular experiences to students preparing them for a productive career. The second goal pertaining to people and processes encompasses increase in enrollment in the Denton campus and decreasing time to graduation.

The proposed Ph.D. program is well positioned by virtue of its tracks and total semester credit hours to attract high-quality students. Consequently, the graduation rates will rise proportionally and in turn enhance the economy of the DFW region and Texas with the establishment of innovative healthcare related startups. The third goal pertaining to scholarly activity and innovation seeks to support, mentor and highlight student scholars. The proposed Ph.D. program will also enable the hiring of highly productive faculty working on cutting edge areas in biomedical engineering. This will enable us to obtain research funding from federal, state and private sources. Thus, growing research in biomedical engineering and at UNT, fulfilling UNT's second strategic goal to grow research. By growing enrollment and research, the department of biomedical engineering seeks to be a top 50 program nationwide in the next 5 years. The resulting growth and ranking is in line with UNT's goal in the strategic plan to grow top ranked programs at UNT. With growth in research and enrollment, the department will endeavor to attract higher levels of donations and thus contribute to UNT's increased foundation assets – UNT's strategic goal 3. By hiring motivated, high quality students and faculty, the department of biomedical engineering will strive to create an atmosphere of innovation, congeniality and shared goals, thus fulfilling UNT's strategic plan 4th goal, to be the best place to work for its faculty and staff.

The state of Texas strategic 60x30 plan goal three goal states that by 2030, all graduates from Texas public institutions of higher education will have completed programs with identified marketable skills. All graduates of the proposed Ph.D. program in biomedical engineering will have the following marketable skills:

1. Problem identification and literature survey
2. Ability to conduct independent research
3. Medical device or process innovation allied with entrepreneurship
4. Knowledge of FDA requirements
5. Analytical skills

UNT has strong programs in the 16-year old College of Engineering. By enabling students to take elective courses from other departments in engineering and the world-renowned College of Music at UNT, the proposed Ph.D. program will leverage UNT's strengths to provide a well-rounded and diverse education to its students. UNT has a well-established department of Biology and a thriving College of Business. By enabling students to work in research partnerships with faculty in Biology, the proposed Ph.D. program in biomedical engineering will form strategic research partnerships that are likely to increase funded research and thus opportunities for its students. The unique partnership with the College of Business will enable students of the program to learn concepts of project management, accounting/finance, marketing and entrepreneurship that essential in setting up their own healthcare-related enterprise.

I. Related and Supporting Programs

Provide data on existing bachelor's and master's programs that would support the proposed program, including applications, admissions, enrollments, and numbers of graduates. Provide graduation rates of related and/or supporting master's programs.

Complete Table 7 with a list of all existing programs that would support the proposed program. This includes all programs in the same two-digit CIP code, and any other programs (graduate and undergraduate) that may be relevant. Include data for the applications, admissions, enrollments, and number of graduates for each of the last five years. Modify the table as needed. The example provided in Table 7 shows degree programs that would relate to or support an additional Ph.D. in another area of chemistry, for example a proposal for a Ph.D. in Chemistry (40.0501).

Table 7. Related and Supporting Programs

	2014	2015	2016	2017	2018
e.g., BS in Biomedical Engineering (14.0501)					
Applications	54	237	216	267	222
Admissions	42	188	154	180	192
Enrollment of declared majors	16	33	36	52	42
Graduates	0	0	0	20 (May 2018)	30 (May 2019)
e.g., MS in Biomedical Engineering (14.0501)					
Applications				38	38
Admissions				30	32
Enrollment of declared majors				9	12
Graduates				0	8 (2018-19)

J. Existing Doctoral Programs

The addition of a new doctoral program should build upon the success of the institution's current doctoral programs. Proposals for new doctoral programs will be considered in context to the success of an institution's existing doctoral programs. Provide the most recent five years of data on enrollments and numbers of graduates for existing doctoral programs.

Describe how existing closely related doctoral programs would enhance and complement the proposed program. Describe all interdisciplinary relationships of the proposed program with existing programs. Also, check to see if any of the institution's doctoral programs are on the Low-Producing Programs list. If any existing doctoral programs are low-producing, list them and provide an explanation for the low productivity and plans for addressing the issue. For new doctoral programs approved during the last five years, check the Annual Progress Reports to determine if the program(s) are meeting institutional projections. Address how the proposed program would meet the proposed projections.

UNT currently offers 34 doctoral programs. The following tables provide five years of enrollment data (J-1) and graduation data (J-2) for UNT doctoral programs.

Table J-1 Program Enrollment	2015	2016	2017	2018	2019
Art Education-PHD	22	20	22	24	22
Audiology-AUD	44	44	44	45	44
Behavioral Science-PHD	14	10	10	13	15
Biochemistry & Molecular Biology-PHD	41	39	43	44	45
Biology-PHD	72	72	71	65	62
Business-PHD	71	63	83	86	92
Chemistry-PHD	78	70	89	85	85
Clinical Psychology-PHD	38	35	41	35	39
Computer Science and Engineering-PHD	97	93	104	112	109
Counseling Psychology-PHD	49	46	48	46	47
Counseling-PHD	50	50	46	45	47
Curriculum and Instruction-PHD	81	83	87	79	77
Educational Leadership-PHD	66	66	90	108	106
Educational Psychology-PHD	72	71	71	76	78
Electrical Engineering-PHD	7	11	25	26	28
English-PHD	64	61	62	60	62
Environmental Science-PHD	21	15	16	17	15
Health Services Research (formerly Applied Gerontology)-PHD	11	9	16	30	31
Higher Education-PHD	82	88	78	88	84
History-PHD	52	47	45	46	53
Information Science-PHD	74	64	79	83	82
Learning Technologies-PHD	86	88	84	113	102
Materials Science and Eng.-PHD	59	48	61	65	58
Mathematics-PHD	51	53	45	44	43
Mechanical and Energy Eng.-PHD	19	23	32	39	49
Music Education-PHD	9	7	10	11	9
Music-PHD	41	45	50	60	63
Performance-DMA	296	312	325	316	310
Philosophy-PHD	30	32	32	31	29
Physics-PHD	47	46	60	53	59
Political Science-PHD	45	39	40	37	36
Public Administration & Management-PHD	24	30	28	34	29
Sociology-PHD	37	38	35	33	35
Special Education-PHD	41	41	32	23	17

Table J-2 Program Graduation	2014-15	2015-16	2016-17	2017-18	2018-19
Art Education-PHD	5	3	2	5	4
Audiology-AUD	10	9	11	11	10
Behavioral Science-PHD	.	3	2	2	1
Biochemistry & Molecular Biology-PHD	5	4	.	5	4
Biology-PHD	7	6	10	12	6
Business-PHD	15	17	10	15	23
Chemistry-PHD	11	20	8	10	16
Clinical Psychology-PHD	8	7	4	10	6
Computer Science and Engineering-PHD	16	7	6	16	17
Counseling Psychology-PHD	8	8	5	13	5
Counseling-PHD	10	9	9	7	5
Curriculum and Instruction-PHD	10	4	9	16	17
Educational Leadership-PHD	2	8	8	16	10
Educational Psychology-PHD	3	9	10	6	10
Electrical Engineering-PHD (New 2015)	.	.	.	2	2
English-PHD	8	11	6	9	8
Environmental Science-PHD	2	5	.	1	3
Health Services Research (formerly Applied Gerontology)-PHD	.	1	3	2	2
Higher Education-PHD	12	12	18	4	8
History-PHD	1	6	4	4	4
Information Science-PHD	13	12	8	8	12
Learning Technologies-PHD	5	16	15	7	14
Materials Science and Eng.-PHD	10	12	9	9	15
Mathematics-PHD	4	5	9	6	9
Mechanical and Energy Eng.-PHD (New 2014)	.	2	4	1	2
Music Education-PHD	3	2	2	3	.
Music-PHD	2	5	4	5	5
Performance-DMA	36	45	40	44	53
Philosophy-PHD	3	5	2	4	5
Physics-PHD	8	6	6	7	7
Political Science-PHD	6	6	8	4	3
Public Administration & Management-PHD	7	6	3	3	3
Sociology-PHD	9	3	6	2	3
Special Education-PHD	1	2	5	3	8

Two doctoral programs currently appear on the Low Producing Program (LPP) List: Health Service Research Ph.D. and Behavioral Science Ph.D.

The Health Service Research Ph.D. transitioned from the Applied Gerontology Ph.D. in 2016. The Applied Gerontology Ph.D. program did not accept new students from 2014 to 2016. At the

time of transition, there were only nine students enrolled. The curriculum was overhauled and the Health Service Research Ph.D. began accepting new students in fall 2017. As of fall 2019 the Health Service Research Ph.D. had 31 students enrolled. With five graduates in 2020, this program will not appear on the LPP list in 2021.

The UNT Psychology Department changed the name of their Experimental Psychology Ph.D. to Behavioral Science Ph.D. in 2014 to reflect trends in the field. The program requires few resources as required courses overlap with other doctoral programs in the department. In addition, the Behavioral Science faculty teach core graduate courses that provide the scientific foundations of psychology required by the department's two additional doctoral programs. The degree provides a credential for students seeking careers in higher education, or research positions in university and private research centers, business, nonprofit, and governmental organizations. All eight recent graduates (2015-2019) are currently working in the field. The program's action plan has been to accept a minimum of three new doctoral students each year. The program has six new doctoral students who will start in the 2020-2021 academic year. The students currently in the program are on track to complete their degrees in a timely fashion. Two students graduated in December of 2019 and two more will graduate in August 2020, which will bring the total to 12 graduates for the five year period (2016 through 2020). As the program currently stands it will not appear on the Low Producing Program report in 2021.

Currently, the College of Engineering at UNT has Ph.D. programs in the following disciplines:

- a. Computer Science and Computer Engineering
- b. Materials Science and Engineering
- c. Mechanical and Energy Engineering
- d. Electrical Engineering

The addition of the proposed Biomedical Engineering Ph.D. program will be the 5th Ph.D. program in the college. Existing Ph.D. programs are not low-output programs. All programs adhere to the 18-point criteria established by the THECB for evaluation of Ph.D. programs and have undergone annual as well as extensive 5-year evaluations.

Within the Ph.D. programs in Materials, Mechanical and Electrical engineering, respectively, there is an option for students to pursue their Ph.D. degree in the particular program with a concentration in Biomedical Engineering. Currently, there are 10 students enrolled in this capacity, since the creation of the graduate program in biomedical engineering in 2017.

K. Recent Graduates Employment

For existing related and supporting graduate programs (master's and doctoral), provide an overview of graduate employment by listing the overall number and percentage of graduates employed within one year of graduation. Also, provide information on the specific jobs held by recent graduates of the programs, such as job titles, fields of employment, and the location and names of their employers.

There has been one graduate who obtained a Ph.D. in Materials Science and Engineering with a concentration in Biomedical Engineering. He is currently employed as a post-doctoral researcher at the University of Pittsburgh, Department of Physical Medicine and Rehabilitation.

The Biomedical Engineering department has graduated 9 students with a M.S. degree in the last

2 years. Three of them are working in industry: manufacturing engineer at Boston Scientific (Optics); Design Engineer at Orthofix (Biomechanics); Consulting Services firm. Two graduates have returned to their home country and the others have not verified their employment.

The Biomedical Engineering department has graduated 53 students with a B.S. degree in the last 2 years. Twelve are pursuing graduate studies – seven at UNT Biomedical Engineering; one in Rensselaer Polytechnic in biomedical engineering; one in South Florida in health management; two are pursuing a career in medicine at medical schools in Texas and one is in a highly competitive M.S. program in biomechanics at UT Southwestern.

Other B.S. graduates are working in diverse companies such as Abbott Laboratories, Plano, TX (Field Engineer); Alcon Labs (Automation engineer); Biomerics (Engineering manager and field engineer); consulting services; Lockheed Martin; BSNF; USPO; UIL, etc.

III. Faculty

A. Faculty Availability

The core faculty members should already be employed by the institution. Core Faculty are full-time tenured and tenure-track faculty who would teach 50 percent or more in the proposed program or other individuals integral to the proposed program and who could direct dissertation research. The proposed program should currently have at least four full-time equivalent (FTE) qualified core faculty members. Faculty to student ratios should be comparable to peer programs. Existing programs should not be significantly weakened if core faculty are to be reassigned to the proposed program. Support Faculty are other full- or part-time faculty who would be affiliated with the proposed program. The addition of the newly proposed program should not negatively affect the existing programs in related areas. The stated specialties of the faculty should align with the proposed course offerings.

Complete Table 8 to provide information about Core Faculty. Add an asterisk (*) before the names of the individuals who would have direct administrative responsibilities for the proposed program. Add a pound symbol (#) before the name of any individuals who have directed doctoral dissertations or master's theses. Modify the table as needed.

Table 8. Core Faculty

Name and Rank of Core Faculty	Highest Degree and Awarding Institution	Courses Assigned in Program	% Time Assigned to Ph.D. Program
# Chivukula, Venkat Keshav Lecturer	Ph.D. in Biomedical Engineering University of Iowa	BMEN 5319, BMEN 6800, BMEN 5800, BMEN 6910	50%
# Ecker, Melanie Assistant Professor	Doctor of Natural Sciences (Ph.D. equivalent) Freie Universität Berlin	BMEN 5321, BMEN 5316, BMEN 6910, BMEN 6950	80%
# Yang, Yong Associate Professor	Ph.D. in Chemical Engineering Ohio State University	BMEN 5325, BMEN 6950, BMEN 6910, BMEN 6940	80%

Shi, Xiaodan Lecturer	Ph.D. in Biomedical Engineering Mississippi State University	BMEN 5314, BMEN 5318, BMEN 5800, BMEN 6910	50%
# Li, Lin Assistant Professor	Ph.D. in Bioengineering University of Texas Arlington and UT Southwestern Medical Center	BMEN 5322, BMEN 5005, BMEN 6910, BMEN 6950	80%
# Meckes, Brian Assistant Professor	Ph.D. IN Bioengineering UC San Diego	BMEN 5315, BMEN 5317, BMEN 6910, BMEN 6950	80%
#Yang, Adam Assistant Professor <i>New faculty for fall 2020</i>	Ph.D. in Bioengineering Clemson University	BMEN 5210, BMEN 5940 BMEN 5324, BMEN 6910 BMEN 6950	60%
#Chan, Clement Assistant Professor <i>New faculty for fall 2020</i>	Ph.D. in Biological Chemistry MIT	BMEN 5313, BMEN 5007, BMEN 6910, BMEN 6950	60%
New faculty in year 1	Ph.D. in Biomedical Engineering or closely related field	BMEN 6930	50%
New faculty in year 2	Ph.D. in Biomedical Engineering or closely related field	BMEN 5311, BMEN 5312, BMEN 5323	80%
*# Vaidyanathan, Vijay Founding Chair	Ph.D. in Biomedical Engineering, Texas A&M University	BMEN 5310, BMEN 6920, BMEN 6950	60%

Support Faculty are other full- or part-time faculty who would be affiliated with the proposed program. Modify the table as needed. Complete Table 9 to provide information about Support Faculty.

Table 9. Support Faculty – Adjunct faculty from Biomedical Engineering

Name and Rank of Support Faculty	Highest Degree and Awarding Institution	Courses Assigned in Program or Other Support Activity	% Time Assigned to Program
# Patterson, Rita Associate Dean, UNTHSC; UNT Adjunct	Ph.D. Biomedical Science UTMB, Galveston	BMEN 5320, BMEN 6910	20%
Albert, Mark Adjunct	Ph.D. in Computational Biology, Cornell University	BMEN 5280, BMEN 6910, BMEN 6950	10%
Chen, Peter Adjunct	M.S. Industrial Engineering, University of Missouri; M.S. Mechanical Engineering, Arizona State University	Industry Expert	5%

Table 9A. Support Faculty from Ryan College of Business and College of Liberal Arts and Social Sciences

Name and Rank of Support Faculty	Highest Degree and Awarding Institution	Sample Business Courses Assigned in Program
Jiminez, Peggy	Ph.D. in Accounting University of North Texas	ACCT 5020
BarNir, Anat	Ph.D. in Business Administration Syracuse University	MGMT 5300
Guzman, Francisco	Ph.D. in Marketing Universitat Ramon Llull- ESADE	MKTG 5150
Hancock, Julie	Ph.D. in Business Administration University of Memphis	MGMT 5140
Wang, Xuexia	PhD in Statistics/Mathematical Science, Michigan Technological Univ, 2008.	BMEN 5700

B. Teaching Load

Indicate the targeted teaching load for core faculty supporting the proposed program. Teaching load is the total number of semester credit hours in organized teaching courses taught per academic year by core faculty, divided by the number of core faculty at the institution the previous year. Provide an assessment of the impact the proposed program will have, if approved, on faculty workload for existing related programs at the institution.

A two-two load for faculty supporting a doctoral program should be the target. The teaching load may vary according to discipline, but it should be low enough to allow the faculty to continue advanced research, supervise dissertations, and provide advising for the proposed program's students. The teaching load of faculty should be comparable to peer programs and meet the institution's standards.

If the distance program will result in additional students, describe how faculty resources will be provided (hiring additional faculty, reallocating faculty resources from other programs, etc.).

In accordance with UNT Policies 06.027 Academic Workload, 06.007 Annual Review and 06.004 Faculty Reappointment, Tenure and Promotion, and its own Department Charter Bylaws and Tenure and Promotion Policy, the Department of Biomedical Engineering will implement the following workload assignment guidelines:

- 1) In accordance with UNT policy 06.027, the Biomedical Engineering department Chair will determine workload guidelines for tenure-track, tenured and non-tenure track faculty in the department.
- 2) During the spring semester of each academic year, the Chair will consult with each faculty

- member and subsequently determine appropriate individual workloads. The workload will be communicated to the faculty by email and a printout.
- 3) The department of Biomedical Engineering and its mission, vision and goals are fully aligned with those of UNT and the College of Engineering. Also, the department understands that its faculty play an important role in realizing research goals for the university and the college. Research active, tenure-track faculty will teach 2 graduate courses and 1 undergraduate course every academic year. Strong growth in research attracts quality graduate students – both M.S. and Ph.D. Strong research allied with strong teaching brings in quality undergraduate students to the department and contributes to the diversity of the student body. Keeping this objective in mind, tenured and tenure-track faculty who are active in research, will have a teaching load of (1+1) in the academic year. '1' refers to one, organized class meeting (10% of teaching load each semester). Such faculty, will be expected to grow their research, increase scholarly productivity and improve yield of M.S. and Ph.D. graduates, as defined in the tenure and promotion criteria for the department. As part of adding value to the department/college/university, faculty classified as research active will be expected to show evidence of research productivity and scholarship to be on a (1+1) teaching load. Such faculty will have a research load of 70%; a teaching load of 20% (2 courses in an academic year) and a service load of 10%. Service load is defined by membership or activity in a department/college/university committee. As a general guidance, teaching (1+1) courses per academic year, conducting active, externally funded research, publishing refereed papers, advising M.S. and Ph.D. students, serving on department or university committees and participating within professional societies are average expectations for typical faculty workload who are research active. Administrative workload assignment depends on arrangements for such administrative appointments by faculty with university and/or college administration. For non-tenure track faculty: the typical teaching load will be (4+4), i.e., 80% with a service load of 20% (committee membership as well as student organization mentoring).
 - 4) The workload assignment by the Chair will take into consideration variations across the unit, such as faculty productivity in teaching, research and service categories, faculty development leaves, research buyouts, joint appointments, initial tenure-track appointments, graduate and undergraduate program advising, and other faculty activities needed for the fulfilment of department mission and effective operation. The chair will also refer to the tenure and promotion criteria document that clearly outlines expectations from tenure-track and non-tenure track faculty in the department. Adjustments may be requested from the chair on an ad hoc basis and/or in the context of annual workload meetings. The chair may adjust teaching, research and service loads at the beginning of a semester, after notifying the faculty member, depending on emerging needs of the department and faculty productivity. A revised workload notification by email from the Chair will be used to document the changes.

C. Core Faculty Productivity

Scholarly activity is determined by calculating 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 over the last five years. A minimum of two peer-reviewed publications per year is expected for research faculty, although this may vary according to the expectations of the discipline and the required professional activity of the faculty. Faculty supporting

doctoral-level professional practice degrees should be engaged in research, applied or otherwise, that has the potential to improve clinical practice and appear in publications relevant to the field.

Complete Tables 10 and 11 to provide information about faculty productivity, including the number of publications and scholarly activities and grant awards. Table 10 shows the most recent five years of data by Core Faculty, including the number of discipline-related refereed papers/publications, books/book chapters, juried creative/performance accomplishments, and notices of discoveries filed/patents issued.

Where relevant to performing arts degrees, major performances or creative endeavors by Core Faculty should be included. Examples are provided below. Do not include conference papers, reviews, posters, and similar scholarship. The format of the tables and information may vary, as long as the information is conveyed clearly. Include a list of the key journals in the field.

Table 10: Total Faculty Publications and Other Scholarly/Creative Accomplishments for the Past Five Years

Faculty Name	Refereed Papers	Book Chapters	Books	Juried Creative/Performance	Patents
Chivukula, Venkat Keshav	19	0	0	0	0
Ecker, Melanie	15	0	0	0	2
Yang, Yong	14	1	0	0	0
Shi, Xiaodan	5	1	0	0	0
Li, Lin	13	0	0	0	0
Meckes, Brian	18	0	0	0	5
Yang, Adam	22	0	0	0	0
Chan, Clement	17	0	0	0	3
Vaidyanathan, Vijay	2	0	0	Created the BMEN department, curriculum, building plans, labs; accreditation	0

Table 11 shows the number and amount of external grants by Core Faculty. If applicable to the field, faculty should be securing external research funds. For each core faculty member, provide the total amount of external funding generated within the past five years (consistent with the methodology used for calculating scholarly activity). Grants earned at institutions or organizations other than the applying institution should not be counted unless the grant money carries over with the faculty member to the applying institution.

Table 11. External Grant Awards for the Past Five Years

Faculty Name	Grant Source	Grant Subject	Dates	Total Grant Amount	Institutional Amount
Chivukula, Venkat Keshav	American Heart Association	Heart Failure Therapy	2016-2018	\$102,000	\$102,000
Yang, Yong	National Institute of Health	Biomimetic Alveolar Interstitium Model for Investigation of Nanomaterials-induced Fibrogenesis	2016-2020	\$449,922	\$449,922
Yang, Yong	National Science Foundation	UNS: Nanotopographical Memory Modulates Stem Cell Fate	2015-2020	\$350,888	\$350,888
Shi, Xiaodan	--	--	--	--	--
Li, Lin	--	--	--	--	--
Meckes, Brian	--	--	--	--	--
Ecker, Melanie	--	--	--	--	--
Vaidyanathan, Vijay	Hoblitzelle Foundation	Promoting Research in biomedical engineering	2018-2020	\$300,000	\$300,000
Chan, Clement (New, Fall 2020)	--	--	--	--	--
Yang, Adam (New, Fall 2020)	--	--	--	--	--

D. Faculty Professional Development and Curriculum Support

Describe the training in delivering instruction via distance education faculty members currently have or will be given. Describe any support that will be available for the start-up development of the courseware.

The Biomedical Engineering department delivers all its courses via in-class instruction. Distance education technology is not being used. The faculty have a teaching load of 1-1, to allow them sufficient time for professional development. In particular, junior faculty in tenure-track positions receive considerable support from the department, the college, and the university. Each of the junior faculty is advised by a mentor, who typically has a successful academic career. We ensure that members of the tenure-track faculty have every opportunity to succeed as educators, scholars, and researchers. The department supports faculty travel to conferences and workshops to present their research. Despite limited resources, the department strives to support faculty for attendance at professional conferences to present scholarly papers. Faculty have access to a TA if their courses have a laboratory component associated with the course. The department also supports graders for faculty according to necessity. The College of Engineering regularly invites experts in teaching to deliver seminars to faculty in the college.

IV. Resources

A. Student Financial Assistance

To be competitive, it is critical that institutions offer comprehensive financial assistance packages to recruit and retain high-quality doctoral students. Providing financial assistance for doctoral students engaged in coursework and dissertation writing is recommended.

Identify the number of full- and part-time students who would be funded and the anticipated amounts for each of the first five years. Provide a plan to provide financial support for at least 50 percent of the full-time students enrolled in the proposed program. Provide a description that demonstrates that the level of financial support will be comparable to or competitive with existing doctoral programs in the discipline. Provide examples of assistance for other similar programs. Budget information should address the amount of assistantships per student, tuition and fee arrangements, and benefits, if any.

Modify the table as needed to distinguish between Teaching Assistantships, Research Assistantships, and Scholarships/Grants. If student financial assistance is reliant upon grant funding, explain how funding will be consistently sustained if grant income falls short of projections. Additionally, show how the level of student support compares to the anticipated overall student cost of tuition and fees.

Some professional programs do not typically support doctoral students. In addition, some programs have high numbers of part-time students who work full-time (e.g., Education and Public Affairs), and financial support for such students is not expected.

The College of Engineering provides funding to the departments to offer Teaching Assistantships to 5 graduate students, especially Ph.D. students. In addition, the department of Biomedical Engineering will fund two more teaching assistantships to enable students to pursue their doctoral studies in the program. As part of their startup package, new faculty get funding from UNT to support two research assistants for 2 years. Thus, Ph.D. students in the proposed Ph.D. program will be supported by funds from the department, college and university. This funding to support our students will be supplemented by our faculty writing research proposals to fund graduate students participating in research. The department also plans to obtain funding from private foundations to support students with additional research assistantships.

Table 12. Student Financial Assistance

		Year 1	Year 2	Year 3	Year 4	Year 5
Teaching Assistantships (incl Teaching Fellowships)	# of Full-time students	6	7	8	9	9
	Amount per student	Approx. \$31,000	Approx. \$31,000	Approx. \$31,000	Approx. \$33,000	Approx. \$33,000
	# of Part-time students					
	Amount per student					
Research Assistantships	# of Full-time students	10	12	14	16	18
	Amount per student	Approx. \$35,000	Approx. \$35,000	Approx. \$35,000	Approx. \$35,000	Approx. \$35,000
	# of Part-time students					
	Amount per student					
Scholarships	# of Full-time students	1	1	2	2	5
	Amount per student	\$1000	\$1000	\$1000	\$1000	\$1000
	# of Part-time students					
	Amount per student					

B. Library Resources

A printout of the library's relevant holdings or a list of the planned acquisitions is not necessary. A letter or other statement from the librarian describing the adequacy of existing resources is required (include as Item E in Required Appendices). Provide the library director's assessment of both paper and electronic library resources necessary for the proposed program. Describe plans to build the library holdings to support the proposed program. Include the amount allocated to the proposed program.

Describe how students will access library resources, including print, electronic, and in person. Describe how communication with the library and interaction with the library staff and librarians occur. Describe how resources are made available in a format that is accessible to remote students.

Library resources and services for the Engineering degree programs serve students through strong local collections, consortium membership access, Interlibrary Loan services, and an extensive combination of locally provided equipment and services.

The UNT Libraries make accessible over 162,000 electronic journals and 262 databases, over 4.6 million print and electronic books, over 230,000 audiovisual materials, and over 430,000 items in the UNT Digital Collections (<http://digital.library.unt.edu/>). The primary collections and reference services for the College of Engineering are housed in the Discovery Park Library facility (<http://www.library.unt.edu/discoverypark>), with additional assistance provided by the Eagle Commons Library (<http://www.library.unt.edu/eagle-commons>), the Media Library

(<http://www.library.unt.edu/media-library>) and the Willis Library (<http://www.library.unt.edu>) on the main campus.

Collection Development Policies can be found on the Library's Web site at <http://www.library.unt.edu/policies/type/collection-development>. Members of the faculty have both the right and the responsibility to recommend materials for purchase to support research and teaching. Liaison librarians ensure that faculty requests for new acquisitions are considered as soon as possible and work with the faculty to identify library materials needs for proposed courses and programs.

C. Facilities and Equipment

Describe the availability and adequacy of facilities and equipment to support the proposed program. Describe plans for new facilities and equipment, improvements, additions, and renovations.

Provide the amount of anticipated expenditures related to facilities and equipment, and include those amounts in the budget under "Costs and Revenues." Also, describe the status of all building project(s) related to the program and include the schedule for completion. For shared equipment and facilities, describe availability for the proposed program.

The department of Biomedical Engineering moved into a brand new building (annex to Discovery Park) in June 2019. The building is a 26,300 square feet facility devoted entirely to biomedical engineering. The building houses three open-concept, research wet laboratories equipped with multiple fume hoods, biosafety cabinets, incubators and spaces within for microscopy and cell culture. Additionally, the research labs also have essential infrastructural equipment like refrigerators, vacuum and gas lines, autoclave room, sinks and eye-wash areas. The research labs are large enough to be shared by three faculty and their students.

The annex has individual office spaces available for 12 faculty; one administrative coordinator office; one lab manager office; two cubicles for student assistants at the front; RA office area that can accommodate 18 research assistants; TA office area that can accommodate six teaching assistants. The TA office area and the faculty offices will have computers and internet connections. The faculty offices have phones and data connections. The BMEN office area also has a conference room, and a break room with a Minolta copier/printer. Addition of the new Biomedical Engineering Annex has resulted in the addition of three new classrooms for the entire college of engineering: a 60-person classroom; an 80-person classroom and a 188-person auditorium/classroom.

Use this link (<https://www.fox4news.com/news/university-of-north-texas-opens-new-biomedical-engineering-facility>) to view a clip about this innovative space from Fox4 news.



The Biomedical Engineering program has the following teaching laboratories available for its students:

Biomedical Engineering Labs	Description
F 242	Instrumentation Lab, shared with computer engineering for teaching BMEN 2210, BMEN 2320, BMEN 3311
K 140	Used to teach BMEN 1300, BMEN 3312, BMEN 4310
K 130	Senior design laboratory
K 271	Biomechanics measurements
K 170	Proposed, undergraduate tissue culture lab

F242 has oscilloscopes, computers, DAQ boards, BIOPAC hardware for biomedical measurements such as ECG, EEG, EMG; function generators, DMM and other electronic equipment and components for laboratory use. The computers in this laboratory have software such as MS office; NI-LabVIEW, MATLAB, Solidworks.

K 140 has the Anatomage virtual surgery device (cost:\$70,000); computers; MSET machines for biomechanics. The computers house software such as MS Office; LabVIEW, MATLAB, OPENSIM, SIM4LIFE (cost: \$14,000), Solidworks, Noraxon Biomechanics Analysis software module (cost: \$12,000), ANSYS and COMSOL.

K 130 has computers with software such as MS Office; MATLAB, LabVIEW and Solidworks, This senior design laboratory also houses three, 3-D printers, each worth \$3000. In addition, the department also has two, bio-3D printers, worth \$10,000 and \$25,000, respectively.

K 271 is an additional research/instructional laboratory space that has motion capture cameras (cost:\$15,000) and IMU based biomechanics system for data collection and demonstration.

The department has adequate space to support instructional and research activities while providing an environment for our students that is conducive to learning.

Listing and square footage of laboratories in BMEN:

- K130 – Senior Design Maker Space – 1,080 SF
- K140 – Biomedical Modeling Lab - 1,129 SF
- K170 – Cell culture teaching lab – 325 SF
- F 242 – Biomedical Instrumentation Lab
- K160 – Open-concept, wet, research Lab– 1,154 SF
- K160A – Component storage– 132 SF
- K160B – Cell culture area – 155 SF
- K160C – Microscopy area – 171 SF
- K253 – Autoclave area – 140 SF
- K270 – Open-concept, wet, research Lab – 2,110 SF

K270A – Microscopy area – 95 SF
K270B – Cell culture area – 222 SF
K271 – Biomechanics Lab– 239 SF
K280 – Open-concept, wet, research Lab – 1,874 SF
K280A – Microscopy area – 98 SF
K280B – Cell culture area – 214 SF

D. Support Staff

Describe plans, if any, to increase or reallocate support staff in order to provide sufficient services for the projected increases in students and faculty. Provide confirmation that existing programs will not be significantly weakened if staff are to be reassigned to the proposed program.

Currently, the department of Biomedical Engineering is adequately staffed with three staff persons – an administrative coordinator, an admin specialist and a laboratory manager. More staff may be added with an increase in number of faculty and students. The staff persons are associated with the department of biomedical engineering, hence there is no weakening of other departments in the college.

E. External Learning

If the proposed program requires an Internship, Clerkship, Clinical Experience, or other external learning opportunity explain how and where this requirement would be met. Describe plans for developing and maintaining this aspect of the proposed program, and provide confirmation that the additional requirements would not negatively affect other programs at the institution. If specific plans for external learning are already developed, list the name of the facility, the city and county of location, a brief description of the facility and its services, and an estimated number of student placements. Explain the impact this new program would have, if approved, on the available number of external learning opportunities in Texas for this type of program.

N.A.

F. List of Potential Expert External Reviewers

Develop a list of suitable expert external reviewers for the proposed program who could provide a desk review and/or serve on a site visit team. Expert External Reviewers should have recognized expertise in the discipline and hold the rank of full professor or senior administrator at institutions with top-ranked programs. Potential expert external reviewers should not have close ties to the institution that could generate a conflict of interest. Potential expert external reviewers should be from institutions outside the state of Texas. Institutions are responsible for reimbursing the Coordinating Board for the travel expenses incurred by and fees paid to expert external reviewers used for desk reviews and site visits that are part of the doctoral review process.

Provide the names and contact information for six potential expert external reviewers to review the proposed program. Describe concisely the qualifications of each expert external reviewer.

Table 13. Institution's Proposed Expert External Reviewers

Reviewer #1	
Name	Harvey Borovetz
Title and Rank	Distinguished Professor, Professor
Institution	University of Pittsburgh
Phone #	412-624-4725
Email	borovetz@pitt.edu
Qualifications/Expertise	Biomedical Engineering; Cardiovascular organ replacements
Reviewer #2	
Name	Lihong Wang
Title and Rank	Bren Professor of Medical Engineering and Electrical Engineering
Institution	California Institute of Technology
Phone #	626-395-1959
Email	lvw@Caltech.edu
Qualifications/Expertise	Bioengineering; biomedical optics; imaging
Reviewer #3	
Name	Daniel Ewert
Title and Rank	Professor, Director of Iron Range Engineering Program
Institution	Minnesota State University, Mankato
Phone #	218-742-9168
Email	daniel.ewert@ire.minnstate.edu
Qualifications/Expertise	Biomedical engineering; project-based engineering education
Reviewer #4	
Name	Mei Wei
Title and Rank	Professor and Dean, Russ College of Engineering
Institution	Ohio University
Phone #	740-593-1479
Email	weim@ohio.edu
Qualifications/Expertise	Biomaterials, tissue engineering
Reviewer #5	
Name	Ratneshwar Lal
Title and Rank	Professor, Department of Bioengineering
Institution	University of California San Diego
Phone #	858-822-0384
Email	rlal@ucsd.edu
Qualifications/Expertise	Nanobiotechnology; nanomedicine
Reviewer #6	
Name	Lee Makowski
Title and Rank	Professor and Chair of Bioengineering
Institution	Northeastern University
Phone #	617-373-3006
Email	l.makowski@northeastern.edu
Qualifications/Expertise	Biosignal processing; medical imaging; biophysical data

G. Five-Year Costs and Funding Sources Summary

Adding a new doctoral degree program will cost the institution some amount of money. Calculating the costs and identifying the funding sources associated with implementation of a new doctoral program requires several institutional offices to collaborate to present an accurate estimate.

Provide an overview of new and reallocated costs for the proposed program using the form Costs to the Institution of the Proposed Doctoral Program. Faculty salaries include all faculty assigned to the proposed program. If an existing faculty member is reassigned to the program, the salary is reflected as a reallocated cost. New faculty salaries need to be competitive for the discipline, and figures include start-up costs in proportion to the new faculty member's allotted time in the proposed program. Faculty salaries do not include benefits or pensions. If the proposed program will hire new faculty, it is a new cost. Program administration includes all institutional costs associated with running the program, including amounts associated with the Dean's office, Institutional Research, and other administrative costs. Graduate Assistant costs are identified either as new or reallocated, as appropriate. Clerical/Staff include specific costs associated with the new program. This includes the additional staff needed to organize applications, prepare for the proposed program, and for general administration of the proposed program. If the enrollments in the proposed program are projected to be large, the associated costs related to clerical/staff may also be more. New staff or purchases of new equipment should be adequate to support the stated goals and enrollments for the proposed program. Other program costs identified in the proposal should be realistic.

Total funding for the proposed program should meet or exceed total costs by the end of the first five years. On the forms provided, include a description of sources for existing and anticipated external funding. Include explanatory footnotes as needed.

Because enrollments are uncertain and programs need institutional support during their start-up phase, institutions should demonstrate that they could provide:

- sufficient funds to support all the costs of the proposed program for the first two years (when no new formula funding will be generated); and
- half of the costs of the proposed program during years three through five from sources other than state funding.

Funding sources may include formula income, other state funding, tuition and fees, reallocation of existing resources, federal funding, and other funding (such as awarded grants). The total projected income of state funding, tuition and fees, and private funds will allow the proposed program to become self-sufficient within five years.

Consult with your institution's Institutional Research department when calculating the formula funding.

When estimating program funding for new programs, institutions take into account that students switching programs do not generate additional formula funds for the institution. For example, if a new doctoral program has ten students, but six of them switched into the program from existing master's programs at the institution, only four

of the doctoral students would generate additional formula funding.

The Other State Funding category could include special item funding appropriated by the Legislature, or other sources of funding from the state that do not include formula-generated funds (*e.g.*, HEAF, PUF).

Reallocation of Existing Resources includes the salary of faculty reassigned who may be partially or wholly reallocated to the new program. Explain how the current teaching obligations of those faculty are reallocated and include any faculty replacement costs as program costs in the budget. If substantial funds are reallocated, explain how existing undergraduate and graduate programs will be affected.

Federal Funding (In-hand only) refers to federal monies from grants or other sources currently in hand. Do not include federal funding sought but not secured. If anticipated federal funding is obtained, at that time it can be substituted for funds designated in other funding categories. Make note within the text of the proposal of any anticipated federal funding.

Tuition and Fees includes revenue generated by the institution from student tuition and fees.

Other Funding category may include auxiliary enterprises, special endowment income, or other extramural funding.

H. Signature Page

The appropriate signature page must be selected and signed by the required institutional official and board of regents.

V. Additional Distance Education Delivery Consideration **Not Applicable**

A. Adherence to *Principles of Good Practice*

Submit the Certification Form or provide a statement from the Chief Academic Officer certifying adherence to *Principles of Good Practice* as well as adherence to Coordinating Board distance education rules and policies.

B. Administrative Oversight and Structure

Identify the person/office directly responsible for the overall management of the proposed program. Identify other responsibilities of the person/office with primary responsibility and any modifications in responsibility made to accommodate the program. Describe the ways in which the delivery method will affect the proposed program.

For online programs:

1. How will exam proctoring and monitoring be managed and evaluated?
2. How will user authentication be validated?
3. How will the proposed program assure compliance with accessibility standards and regulations (institutional, state, and federal) for instructional delivery, course materials, and other components of the proposed program?

C. Collaborative Arrangements

Describe all collaborative arrangements with other institutions that will be participating in the delivery of the proposed program. Be certain to identify the:

1. Responsibilities of each institution.
2. Process for the credentialing of faculty at each participant site.
3. Institution awarding credit.

D. Program Differences

If the proposed program will be delivered both on-campus face-to-face at the main campus and at a distance, describe all differences between on-campus and distance delivery, including:

1. Student admission and advisement.
2. Qualifying and other exams.
3. Independent study.
4. Courses and sequencing.
5. Library access.
6. Discuss the accommodations available for students with special needs to assure accessibility to the course materials, activities, and support services related to the proposed program.

E. Student Interactions

- Describe the orientation process. Beyond the courses, how are students oriented to the services of the institution – library, student support, etc.
- Describe how electronic and on-campus students would interact. How will interactions occur between distance education students?
- Describe how instructor and students will interact throughout the program. Include interactions both in and out of the classroom setting. How is the sense of community developed? As a doctoral program, detail how you can create a residency equivalent experience.
- Describe residency requirements.
- Describe the advisement process throughout the proposed program.
- Describe how you plan to address dissertation requirements, oversight, and mentoring during the dissertation process.

VI. Required Appendices

A. Course Descriptions and Prescribed Sequence of Courses

B. Five-Year Faculty Recruitment Plan/Hiring Schedule

C. Institution's Policy on Faculty Teaching Load

If teaching load policy is set at the departmental level, include that information.

D. Itemized List of Capital Equipment Purchases During the Past Five Years⁷

Equipment means an article of nonexpendable, tangible personal property having a useful life of more than one year and an acquisition cost, which equals or exceeds the lesser of the capitalization level established by the governmental unit for financial statement purposes, or \$5,000.

E. Librarian's Statement of Adequate Resources

F. Articulation Agreements with Partner Institutions

Include copies of any agreements or Memoranda of Understanding related to the proposed program. These include formal and sustained arrangements with other universities, private businesses, or governmental agencies that contribute directly to the proposed program and student research/residency opportunities.

G. Curricula Vitae for Core Faculty

H. Curricula Vitae for Support Faculty

I. List of Specific Clinical or In-Service Sites to Support the Proposed Program

J. Letters of Support from Peer Institutions and/or Area Employers

Letters from regional and national companies who have made commitments to hire doctoral graduates from the proposed new program are particularly helpful. Also, include statements of support or commitments to shared research projects from other institutions in the state with similar doctoral programs.

⁷ "Equipment" has the meaning established in the Texas Administrative Code §252.7(3) as items and components whose cost are over \$5,000 and have a useful life of at least one year.

Costs to the Institution of the Proposed Program

Complete the table to show the costs to the institution that are anticipated from the proposed program.

Cost Category	Cost Sub-Category	1st Year	2nd Year	3rd Year	4th Year	5th Year	TOTALS
Faculty Salaries ¹	New	\$105,000	\$200,000	\$305,000	\$305,000	\$305,000	\$1,220,000
	Reallocated						
Program Administration	New	N/A- Already exists	N/A	N/A	N/A	N/A	\$0
	Reallocated						
Graduate Assistants	New (2/yr)	\$124,000	\$124,000	\$124,000	\$124,000	\$124,000	\$620,000
	Reallocated						
Clerical/Staff	New	N/A- Already exists	N/A	N/A	N/A	N/A	\$0
	Reallocated						
Student Support (Scholarships)							
Supplies and Materials		N/A- Already exists	N/A	N/A	N/A	N/A	\$0
Library & Instructional Technology Resources ²		N/A- Already exists	N/A	N/A	N/A	N/A	\$0
Equipment ²		N/A- Already exists	N/A	N/A	N/A	N/A	\$0
Facilities		N/A- Already exists	N/A	N/A	N/A	N/A	\$0
Other (Identify)							
TOTALS		\$229,000	\$324,000	\$429,000	\$429,000	\$429,000	\$1,840,000

¹ Report costs for new faculty hires, graduate assistants, and technical support personnel. For new faculty, prorate individual salaries as a percentage of the time assigned to the program. If existing faculty will contribute to program, include costs necessary to maintain existing programs (e.g., cost of adjunct to cover courses previously taught by faculty who would teach in new program).

² Equipment has the meaning established in the Texas Administrative Code §252.7(3) as items and components whose cost are over \$5,000 and have a useful life of at least one year.

Anticipated Sources of Funding

Complete the table to show the amounts anticipated from various sources to cover new costs to the institution as a result of the proposed program. Use the Non-Formula Sources of Funding form to specify each non-general revenue source.

Funding Category	1st Year	2nd Year	3rd Year	4th Year	5th Year	TOTALS
I. Formula Funding¹			\$358,527	\$394,380	\$475,049	\$1,227,956
II. Other State Funding	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
III. Reallocation of Existing Resources	\$400,000	\$400,000	\$400,000	N.A.	N.A.	\$1,200,000
IV. Federal Funding (In-hand only)	\$50,000					\$50,000
V. Tuition and Fees	\$61,649	\$90,851	\$129,788	\$142,767	\$171,969	\$597,024
VI. Other Funding²	\$20,000					\$20,000
TOTALS	\$531,649	\$490,851	\$888,315	\$537,147	\$647,018	\$3,094,980

¹ Indicate formula funding for students new to the institution because of the program; formula funding should be included only for years three through five of the program and should reflect enrollment projections for years three through five.

² Report other sources of funding here. In-hand grants, "likely" future grants, and special item funding can be included.

Non-Formula Sources of Funding

Complete the table to specify each of the non-formula funding sources for the amounts listed on the Anticipated Sources of Funding form.

Funding Category	Non-Formula Funding Sources
II. Other State Funding	#1 N.A.
	#2
III. Reallocation of Existing Resources	#1 \$400,000 is startup funds each year, for the first three years from office of SVP F&A
	#2
IV. Federal Funding (In-hand only)	#1 Funds from NIH and NSF grants obtained by Dr. Yong Yang
	#2
V. Tuition and Fees	#1 Tuition and fees including \$60 per SCH program fee with an average of 18 SCH per year per FTE student.
	#2
VI. Other Funding	#1 Hoblitzelle Foundation Grant for Dr. Vaidyanathan- \$20,000 left over out of \$300,000
	#2

H. Institutional and Board of Regents Signature Page for Board Consideration

1. **Adequacy of Funding** – The Chief Executive Officer shall sign the following statement:

I certify that the institution has adequate funds to cover the costs of the new program. Furthermore, the new program will not reduce the effectiveness or quality of existing programs at the institution.

Chief Executive Officer

Date

2. **Accuracy of Financial Estimates** – The Chief Financial Officer shall sign the following statement:

I certify that the estimated costs and sources of funding presented in the proposal are complete and accurate.

Chief Financial Officer

Date

3. **Reimbursement of Expert External Reviewer Costs** – The Chief Executive Officer shall sign the following statement:

I understand that the doctoral proposal process includes the use of expert external reviewers. In the event that one or more expert external reviewer are contracted to review a doctoral proposal put forward by my institution, I understand that my institution will be required to reimburse the Texas Higher Education Coordinating Board for costs associated with the use of such expert external reviewers. By signing, I agree on behalf of my institution to provide reimbursement for expert external reviewer costs.

Provost/Chief Executive Officer

Date

4. **Board of Regents Certification of Criteria for Board Consideration** – The Board of Regents or designee must certify that the new program has been approved by the Board of Regents and meets the criteria under Texas Administrative Code (TAC), Title 19, Chapter 5, Subchapter C, Section 5.46.

On behalf of the Board of Regents, I certify that the new program meets the criteria specified under Texas Administrative Code (TAC), Title 19, Chapter 5, Subchapter C, Section 5.46 and has been approved by the Board of Regents.

Board of Regents (Designee)

Date

H. Board of Regents Signature Page for Commissioner Consideration

5. **Board of Regents Certification of Criteria for Commissioner or Assistant Commissioner Consideration** – Typically proposals for doctoral programs are approved by the Board, supported with a recommendation for approval by the Commissioner. Under very limited circumstances, a program may be approved by the Commissioner. In this case only, the Board of Regents or designee must certify that the new program meets the criteria under Texas Administrative Code (TAC), Title 19, Chapter 5, Subchapter C, Section 5.50 (b) and (c).

TAC §5.50(b) The program:

- (1) has a curriculum, faculty, resources, support services, and other components of a degree program that are comparable to those of high quality programs in the same or similar disciplines at other institutions;
- (2) has sufficient clinical or in-service sites, if applicable, to support the program;
- (3) is consistent with the standards of the Commission of Colleges of the Southern Association of Colleges and Schools Commission on Colleges and, if applicable, with the standards or discipline-specific accrediting agencies and licensing agencies;
- (4) attracts students on a long-term basis and produce graduates who would have opportunities for employment; or the program is appropriate for the development of a well-rounded array of basic baccalaureate degree programs at the institution;
- (5) does not unnecessarily duplicate existing programs at other institutions;
- (6) does not be dependent on future Special Item funding;
- (7) has new five-year costs that would not exceed \$2 million.

TAC §5.50(c) The program:

- (1-2) is in a closely related discipline to an already existing doctoral program(s) which is productive and of high quality;
- (3) has core faculty that are already active and productive in an existing doctoral program;
- (4) has a strong link with workforce needs or the economic development of the state; and
- (5) the institution has notified Texas public institutions that offer the proposed program or a related program and resolved any objections.

On behalf of the Board of Regents, I certify that the new program meets the criteria specified under Texas Administrative Code (TAC), Title 19, Chapter 5, Subchapter C, Section 5.50 (b) and (c) and has been approved by the Board of Regents.

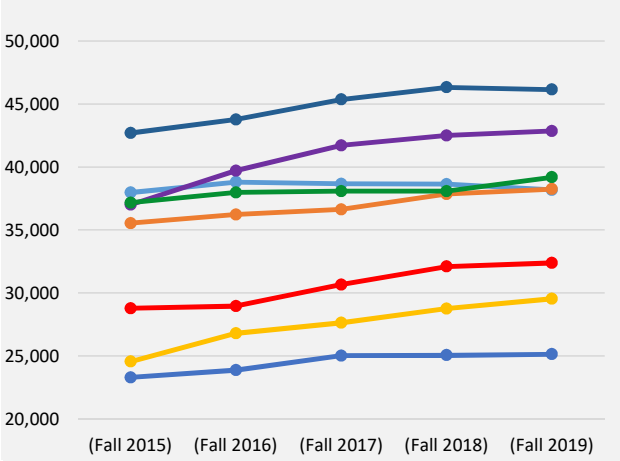
Board of Regents (Designee)

Date

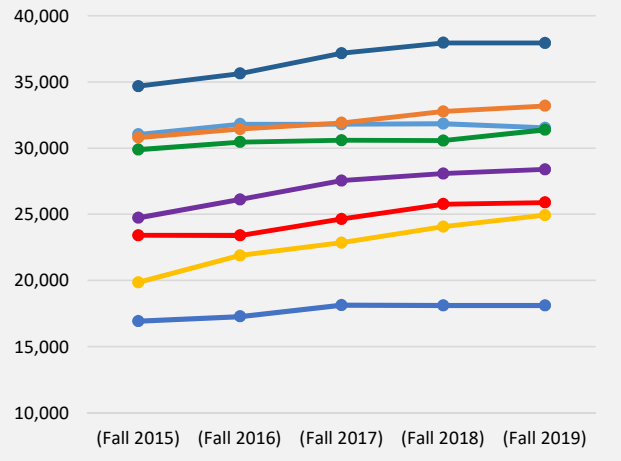
Student Access & Success Metrics



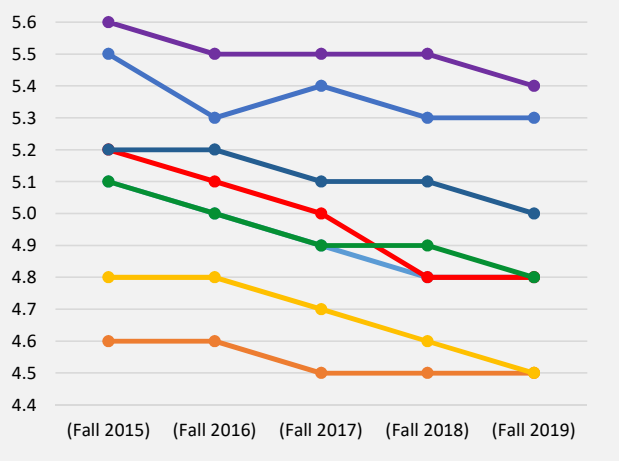
Total Headcount Enrollment



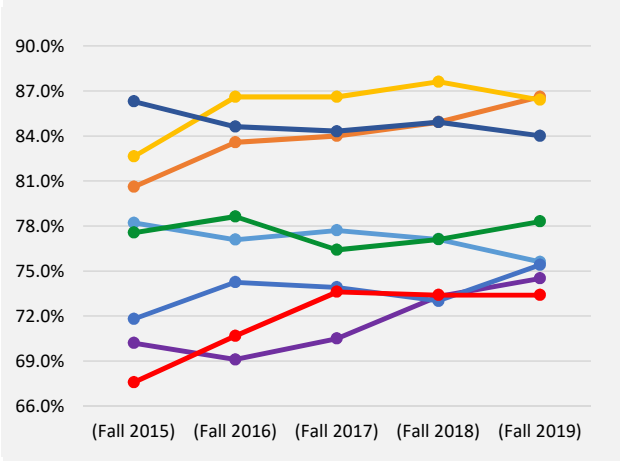
Total Full Time Student Equivalent



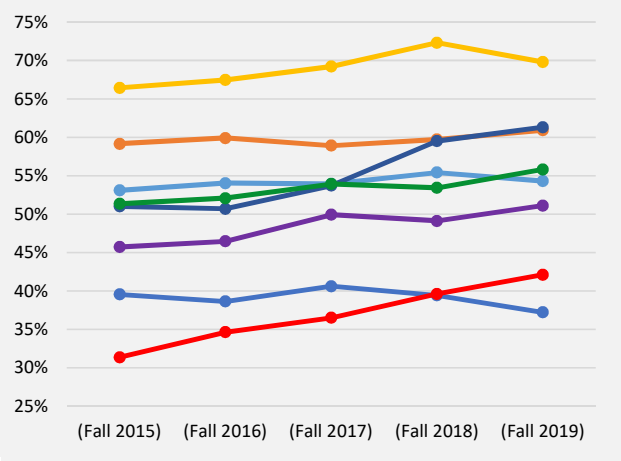
Time-to-Degree, Bachelors



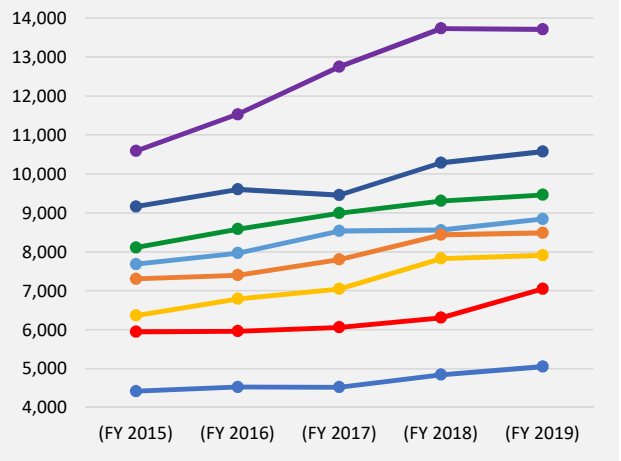
1st to 2nd Year Retention Rate



Six Year Graduation Rate



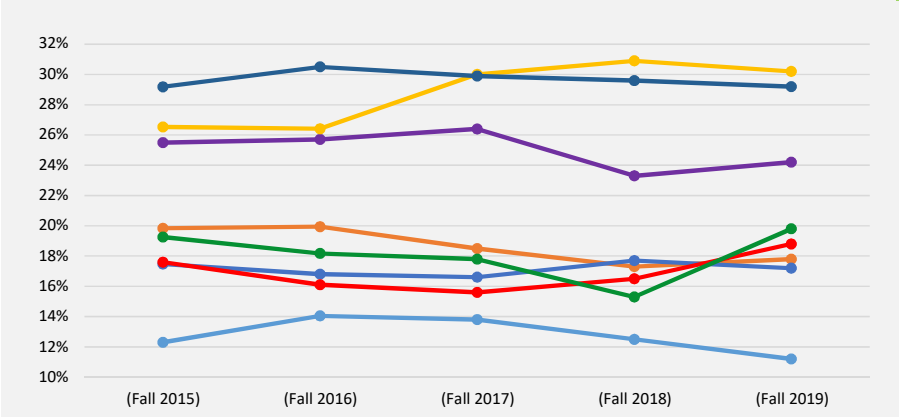
Total Degrees & Certificates Awarded



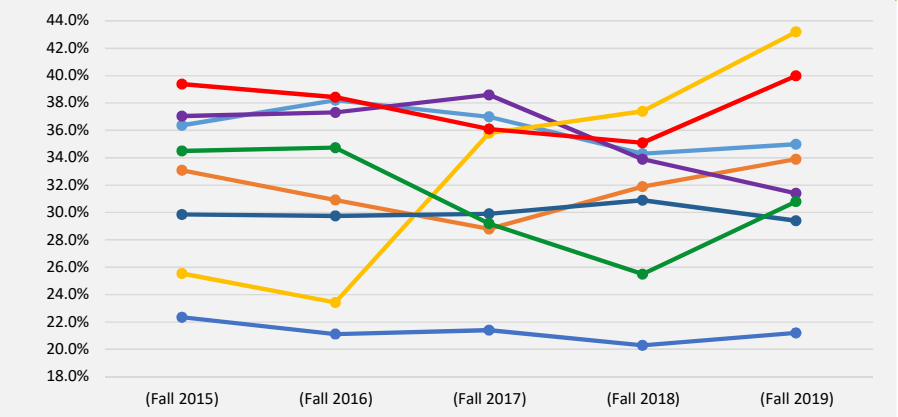
- Texas State University
- Texas Tech University
- The University of Texas at Arlington
- The University of Texas at Dallas
- The University of Texas at El Paso
- The University of Texas at San Antonio
- University of Houston
- University of North Texas

Academic Quality Metrics

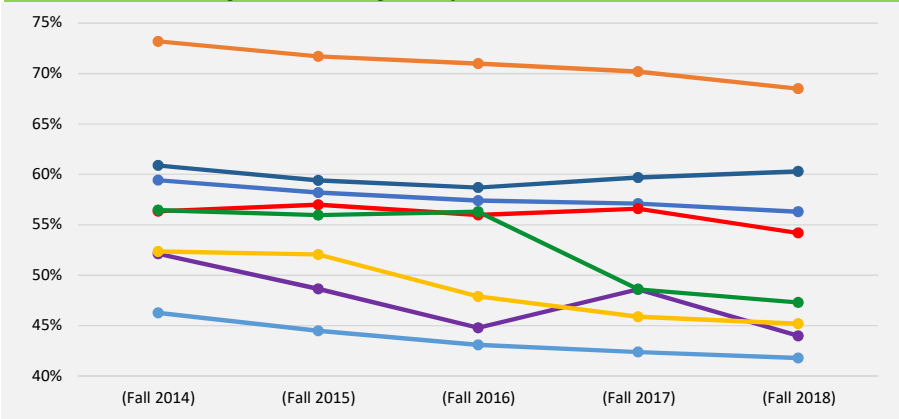
First Time Students in Top 10% of High School Class



First Time Students in Top 11-25% of High School Class

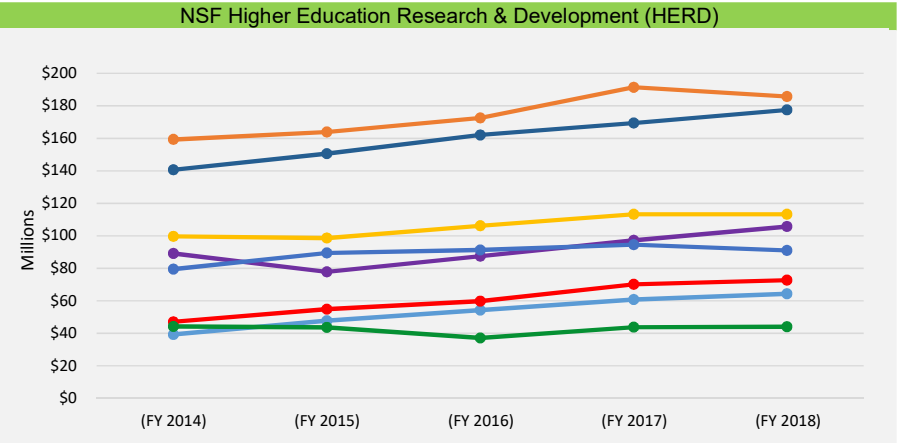
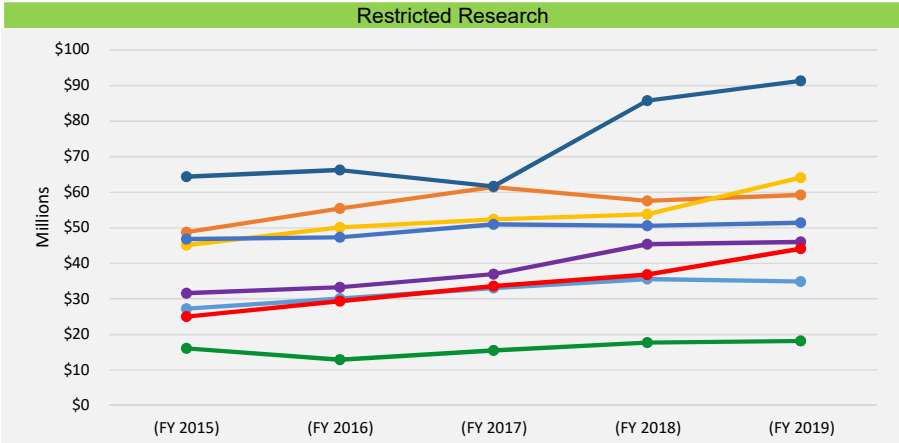
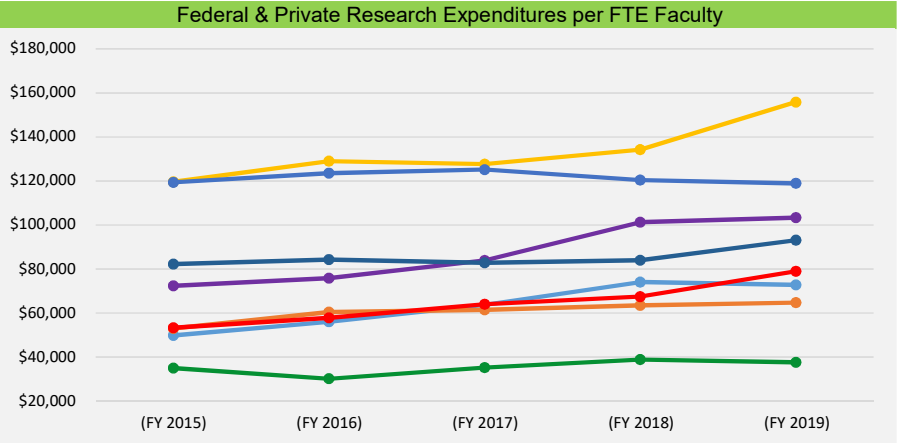
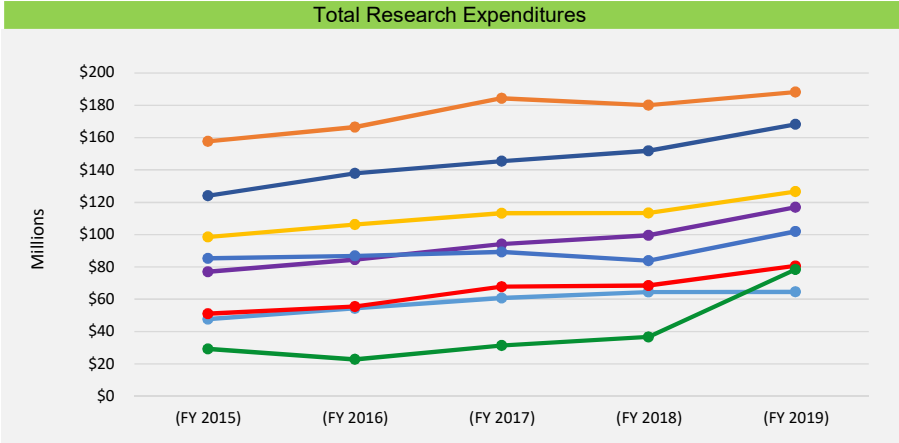


Percentage FTE Teaching Faculty Who Are Tenured/Tenure Track



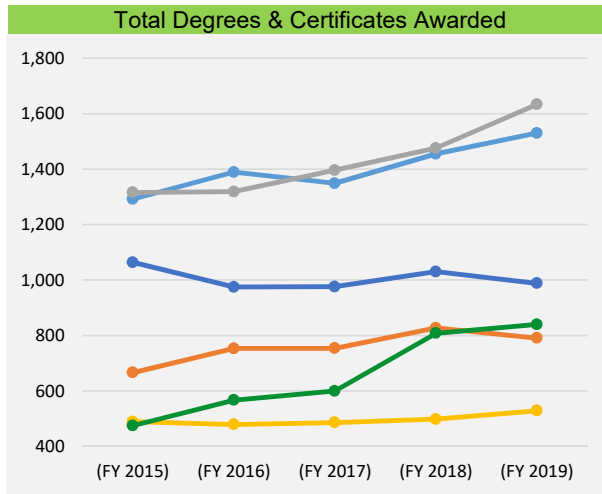
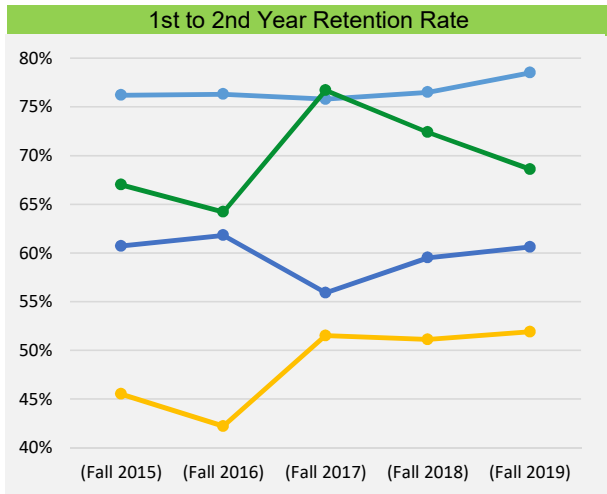
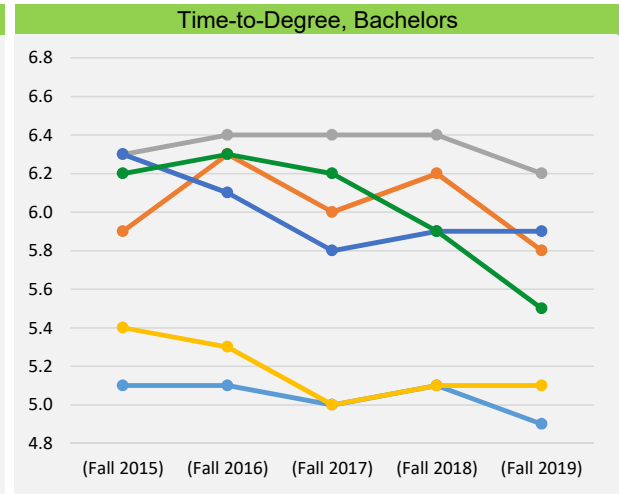
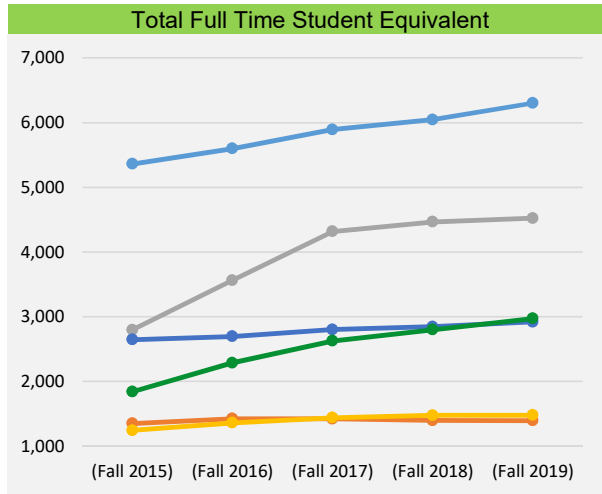
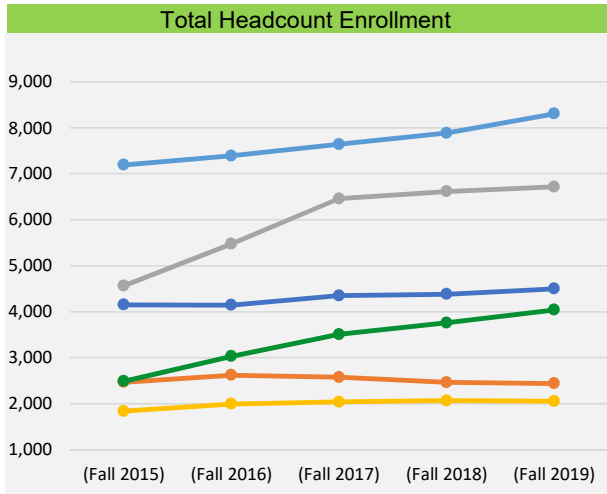
- Texas State University
- Texas Tech University
- The University of Texas at Arlington
- The University of Texas at Dallas
- The University of Texas at El Paso
- The University of Texas at San Antonio
- University of Houston
- University of North Texas

Research Metrics



- Texas State University
- Texas Tech University
- The University of Texas at Arlington
- The University of Texas at Dallas
- The University of Texas at El Paso
- The University of Texas at San Antonio
- University of Houston
- University of North Texas

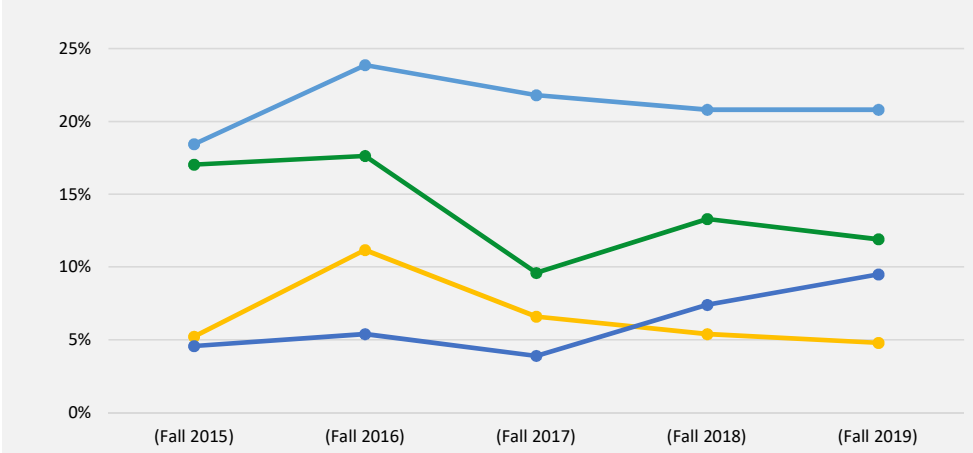
Student Access & Success Metrics



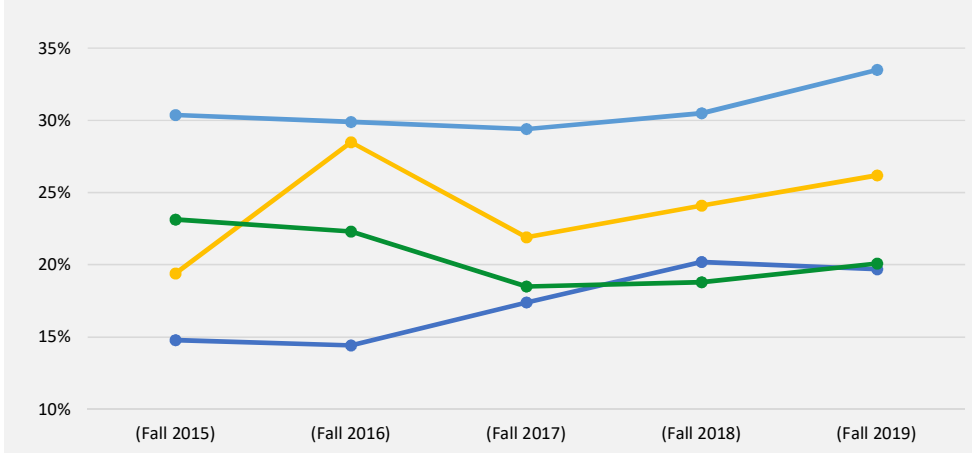
- Texas A&M International University
- Texas A&M University-Central Texas
- Texas A&M University-San Antonio
- Texas A&M University-Texarkana
- University of Houston-Victoria
- University of North Texas at Dallas

Academic Quality Metrics

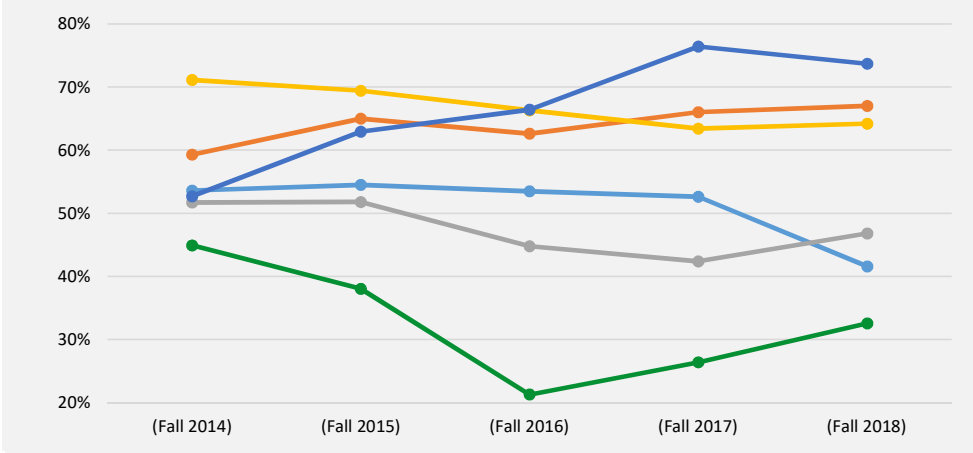
First Time Students in Top 10% of High School Class



First Time Students in Top 11-25% of High School Class

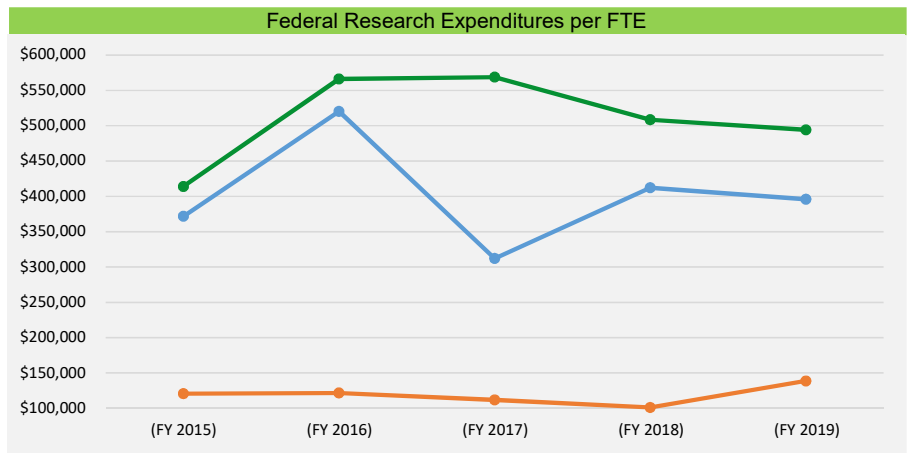
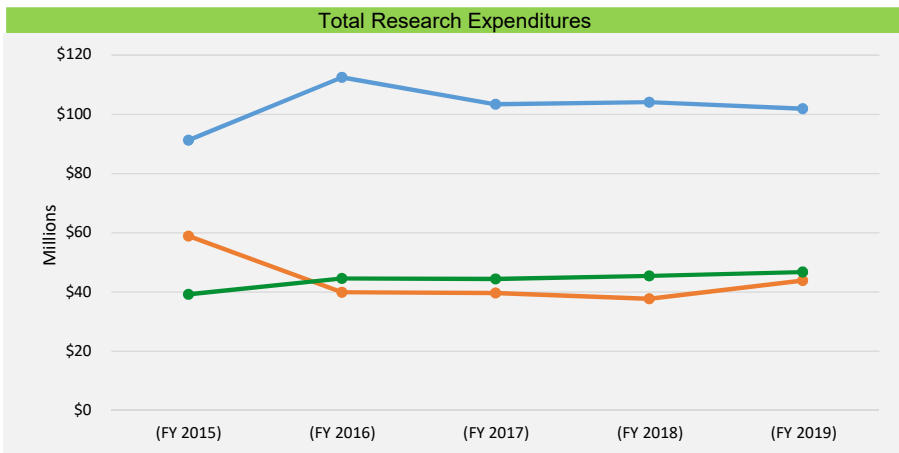
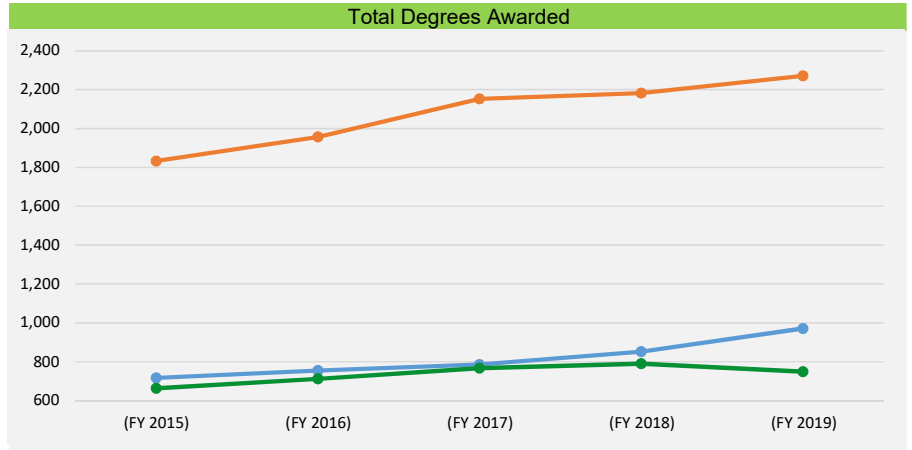
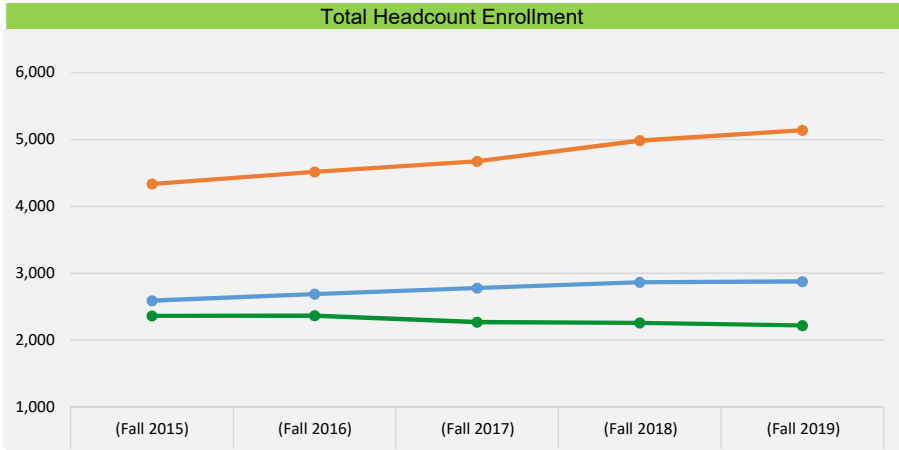


Percentage FTE Teaching Faculty Who Are Tenured/Tenure Track



- Texas A&M International University
- Texas A&M University-Central Texas
- Texas A&M University-San Antonio
- Texas A&M University-Texarkana
- University of Houston-Victoria
- University of North Texas at Dallas

Student Success and Research Metrics



● Texas A&M Health Science Center
 ● Texas Tech University Health Sciences Center
 ● University of North Texas Health Science Center

UNT SYSTEM ACADEMIC METRIC DEFINITIONS

Academic Quality:

First Time Students in Top 10% of High School Class

Definition: Percent of first-time undergraduates entering summer/fall class who ranked in the top 10 percent of their Texas public high school classes.

Source: THECB Accountability System

First Time Students in Top 11-25% of High School Class

Definition: Percent of first-time undergraduates entering summer/fall class who ranked in the top 11-25 percent of their Texas public high school classes.

Source: THECB Accountability System

Percentage FTE Teaching Faculty Who Are Tenured/Tenure Track

Definition: Percent of all FTE faculty with teaching responsibility who are tenured or tenure-track. Faculty of all FTE faculty, rank codes 1 through 5, with teaching responsibility (appointment codes 01 and 02 and are reported during the fall semester as the teacher of record on the CBM004) who are tenured or tenure-track. Teaching assistants are not included, to match LBB measure.

Source: THECB Accountability System

Full Time Student Equivalent per Full Time Faculty Equivalent

Definition: Full-time student equivalents (FTSE) divided by full-time equivalent (FTE) faculty. Undergraduate full-time-student-equivalents (FTSE's) are calculated on 15 semester credit hours; master's, pharmacy, law, and other special profession FTSEs are calculated on 12 semester credit hours; optometry is calculated on 17 semester credit hours; and doctoral FTSEs are calculated on 9 semester credit hours. All semester credit hours, not just state-funded hours, are included. FTE (full-time equivalent) faculty are instructional faculty with rank codes 1-5 and appointment codes 01 and 02. Faculty must be teaching a course reported on the CBM004. Only the percent time in appointment codes 01 and 02 are counted. Faculty members without a salary are included. Teaching assistants are not included to match LBB measure.

Source: THECB Accountability System

UNT SYSTEM ACADEMIC METRIC DEFINITIONS

Student Access & Success

Total Headcount Enrollment

Definition: Unduplicated fall enrollment. Dual credit students are included in the total; flex entry students are not.

Source: THECB Accountability System

Total Full Time Student Equivalent

Definition: Fall semester credit hours (SCH), includes (funded and non-state-funded) calculated by dividing undergraduate/15, master's/12, doctoral/9, special-professional/12, and optometry/17.

Source: THECB Accountability System

Time-to-Degree, Bachelors

Definition: Average time in years spent to earn bachelor's degree.

Source: THECB Higher Education Almanac

First to Second Year Retention Rate

Definition: Percent of first-time entering, degree-seeking undergraduates enrolled in at least 12 SCH in the fall semester who are still enrolled at the same institution the following fall. All public and independent institutions are included in the persistence rate.

This metric includes Social Security Number (SSN) changes submitted on the CBM00N.

Source: THECB Accountability System

Six Year Graduation Rate

Definition: First-time, full-time entering degree-seeking students who enrolled in a minimum of 12 SCH their first fall semester who graduated from the same institution after six academic years. This metric includes Social Security Number (SSN) changes submitted on the CBM00N. First-time determined by the "first-time student flag" on CBM001.

Source: THECB Accountability System

Total Degrees & Certificates Awarded

Definition: Number of degrees and certificates awarded, not including graduate certificates.

Source: THECB Accountability System

UNT SYSTEM ACADEMIC METRIC DEFINITIONS

Research:

Total Research Expenditures

Definition: Total research expenditures, including all subcategories of sources of funds (federal, state, private, and institutional). Restricted research expenditures are a subset of total research expenditures. To qualify as research, the primary purpose of the contract, gift, or grant must be research.

Source: THECB Accountability System

Restricted Research Expenditures

Definition: Restricted research expenditures are a subset of total research expenditures. They are expenditures of funds on which an external entity (such as government agencies, philanthropic organizations, or individuals) has placed limitations and for which the use of the funds qualifies as research and development. To qualify as research, the primary purpose of the contract, gift, or grant must be research. The Coordinating Board collects restricted research expenditures for formula distribution or Research Development Funds (RDF) and as criterion for the National Research Universities Fund (NRUF). The collection of restricted research expenditures includes a public procedure assuring transparency and commonality between institutions. The definition of restricted research expenditures is more narrowly defined than restricted research expenditures that are listed in institutions' Annual Financial Reports (AFRs). Accountability system estimates for restricted research expenditures for institutions that are not participating in RDF or NRUF (e.g. Texas A&M University, The University of Texas at Austin, and health-related institutions) are research expenditures minus state appropriated funds, institutional funds, and indirect cost. Estimated restricted research expenditures and data from institutions AFR must not be compared directly with restricted research expenditures collected for RDF and NRUF.

Source: THECB Accountability System

Federal and Private Research Expenditures per FTE Faculty

Definition: Federal and private research expenditures divided by the number of fall tenured/tenure-track full-time-equivalent faculty (ranks 1-5) with teaching responsibilities (01 and 02).

Source: THECB Accountability System

Background Report



Committee: Audit & Finance

Date Filed: August 24, 2020

Title: Executive Summary of Internal Audit Briefings – August 2020

Background:

Attached is an executive summary of two August 2020 Internal Audit Briefings to the Audit & Finance Committee of the Board of Regents.

Financial Analysis/History:

This is a report item only.

Vice Chancellor for Finance

Legal Review:

This item has been reviewed by General Counsel.

Vice Chancellor/General Counsel

Schedule:

These briefings summarized in this attachment will be presented to the Audit & Finance Committee on August 13, 2020.

No action required. Information only. Submitted by:

Sheba Joyner
Interim Chief Audit Executive

Chancellor

Attachments Filed Electronically:

- Executive Summary

Executive Summary

The Internal Audit department is currently operating based on a 'detection' strategy. This is where problems are reported with recommended solutions based on checking compliance with applicable statutes/policies. The goal is for the department to partner with other lines of defense to optimize risk management for the organization. To enhance the value of the Internal Audit function, a new business model is being implemented with a co-sourcing partnership between UNTS Internal Audit staff and a professional service firm. The co-sourcing partnership will provide an economic benefit of technical flexibility, agility as well as cost savings in the long-term.

External Review

The external review conducted by Protiviti identified 27 unique gaps. 48% of the gaps has been remediated this quarter. 26% are in progress and should be complete by November 2020. The remaining 26% have not started and should begin September 2020.

Some of the department's priorities will be to increase the risk appetite as well as to use data analytics to increase audit efficiency and facilitate more efficient coverage of risks. Furthermore, data analytics will be used for continuous control assessment and continuous risk assessment. Continuous control assessment is designing a technology-assisted approach to test controls and identify deficiencies. This allows the Chief Audit Executive to provide management an early warning of control violations/deficiencies. The continuous risk assessment is using data-driven indicators of risk/performance which highlight processes or systems that are experiencing higher than expected level of risk. These risks will then feed into the annual audit plan.

The strategic review showed the budget was 52% above peer organizations. Therefore, the budget was reduced from \$3.2 million to \$1.9 million. If adjustments need to be made, Internal Audit will descope projects on the annual audit plan to meet the annual budget.

Remaining Items on FY20 Audit Plan

All engagements in a 'Fieldwork or Reporting' status will be complete by September 2020. There is one engagement (i.e. Dining Services) proposing to be canceled which was communicated to Chair Wright, Regent Munguia and the Chief Financial Officer. In addition, there is one engagement (i.e. School of Medicine) that will be carried forward to FY21 due to Covid-19. This engagement was included in the FY21 annual audit plan.

Investigation Status

There were 18 investigations completed this fiscal year and all have been closed. The hours documented in the time tracking system were inaccurate; therefore actual hours were unable to be obtained. Due to the high volume of investigations conducted by Internal Audit, we have worked with the Office of General Counsel and each institutional Compliance Office to develop a framework surrounding how to triage/assess the complaints being received. This framework is currently a work in progress, but Internal Audit will generally review material allegations greater than a certain dollar amount or certain positions across the institution.

Follow-Up Status

Action plans that required a revised due date was because of Covid-19 or changes in leadership, which are reasonable.

Annual Audit Plan

For the FY21 annual audit plan, in order to develop the audit universe, the following were utilized: ERM as the baseline, strategic initiatives, analyzing financial data, interviews and emerging risks. Internal Audit collaborated with all institutional Chief Compliance Officers to ensure the audit universe was complete and then ranked each risk based on impact and probability. The risks ranked as critical or high were identified on the FY21 annual audit plan. Not all high risks were included in the FY21 annual audit plan due to resource availability. Internal Audit then partnered with management surrounding the identified audits and finalized the plan.

Although the internal audit annual plan has been revamped, due to the short turnaround time in developing the plan, there still needs improvement. For future annual risk assessments, this will be conducted together with the professional service firm, to obtain technical expertise for the IT risk assessment and the use of data analytics for identifying data-driven indicators of risk/performance.

Background Report



Committee: Audit & Finance

Date Filed: July 6, 2020

Title: UNT System Consolidated Quarterly Compliance Report March 2020 through May 2020

Background:

This report presents the quarterly compliance program activities for the University of North Texas System, University of North Texas, University of North Texas Health Science Center and the University of North Texas at Dallas from March 1, 2020 through May 31, 2020. Regular reporting of compliance program content and operations to the UNT System Board of Regents is required by the United States Sentencing Commission's Federal Guidelines §8B2.1(b)(2)(A).

This quarterly report has been consolidated to reflect the compliance activities for all UNT System components. This report reflects the actions that management and each compliance function has taken to manage their highest compliance risks.

Financial Analysis/History:

This is a report item only.

Vice Chancellor for Finance

Legal Review:

This item has been reviewed by General Counsel.

Vice Chancellor/General Counsel

Schedule: N/A

No action required. Information only.

Submitted by:

Tim Willette
UNT System Chief Compliance Officer

Interim Chief Audit Executive

Chancellor

Attachments Filed Electronically:

- UNT System Consolidated Quarterly Compliance Report: March 2020 – May 2020



OFFICE OF INSTITUTIONAL COMPLIANCE
QUARTERLY COMPLIANCE REPORT
3^RD QUARTER FY20

SUBMITTED BY
TIM WILLETTE
CHIEF COMPLIANCE OFFICER

BOARD OF REGENTS MEETING
AUGUST 13th & 14th, 2020

Unless Otherwise Noted: Activities reflected are as of May 31st, 2020

Introduction

At UNT System Administration, the Office of Institutional Compliance (Office) provides centralized oversight and substantive support toward the ethical, lawful, and responsible conduct of all operations. The Office identifies and analyzes a wide range of existing and emerging compliance concerns. It works closely with key administration stakeholders to foster a culture of compliance that supports the mission of the University. This requires a resilient partnership between the CCO and each of the organizational leaders who serve on the Chancellor's Cabinet. The organizational structure of the UNT System Administration Compliance and Integrity Program is provided as an appendix.

Executive Summary

Each Chief Compliance Officer (CCO) reports to the Board of Regents, at a minimum, quarterly. These reports update Board members on the effectiveness of the Compliance and Ethics Program at each of the institutions. This quarterly report provides a summary and highlights of compliance activities that have taken place during the third quarter (Q3) of Fiscal Year 2020 (FY20) at UNT System Administration. It is divided into six sections with one appendix.

- Introduction
- Executive Summary
- Compliance Integrity Program
- FY20 Q3 Compliance Risk Work Plan Progress
- FY20 Q3 Investigations
- Emerging Risks

Compliance & Integrity Program

During FY20 Q3, the CCO continued reviewing and assessing the effectiveness of the System Administration Compliance and Integrity Program per the guidance provided in UNT System Regulation 02.1000; *Compliance and Integrity Program*, dated 10/17/2017. Referencing the seven Federal Sentencing Guideline Objectives (FSGOs) listed below, the following efforts are serving to sustain, enhance, and improve the UNT System Administration Compliance and Integrity Program.

- Active Oversight
Every member of the Chancellor's Cabinet is kept current on the overall effectiveness of the Compliance and Integrity Program for UNT System Administration. The CCO provides quarterly updates of the annual Compliance Risk Work Plan to this senior leadership team. Meeting weekly, the members of the Chancellor's Cabinet are actively engaged in identifying, communicating, and assessing emerging risks. Currently, these meetings have evolved into a "Daily Tag" that serves to coordinate collaborative responses to emerging risks brought about by the universal impact of the COVID-19 virus pandemic. This includes identifying emerging local, state, and federal compliance requirements. The commitment to fostering a culture of compliance is pervasive throughout all UNT System Administration operations. In their roles as leaders, each Cabinet member is actively encouraging all individuals of the UNT System to comply with the guidance from federal, state, and local government agencies. Each member of the Chancellor's Cabinet has been provided an update of the Compliance Risk Work Plan for FY20 Q3.
- Policies, Standards, and Code of Conduct
UNT System Administration is committed to the implementation and maintenance of regulations and policies that facilitate the detection and prevention of unethical and illegal conduct throughout the UNT System. These regulations and policies promote integrity, principled behavior, and compliance with federal, state, and local regulations, Regents Rules, System Regulations, and the standards of all applicable accrediting bodies. During FY20 Q3, all UNT System Administration regulations and policies are being reviewed as part of the Policy Management Initiative. Highlights of the efforts during this period are provided as progress of the annual Compliance Risk Work Plan risk focus area. UNT System Administration continues to transition to a new policy management system. This includes collaborative engagement among several of the institutional to implement a standard policy template.
- Education and Training
All UNT System Administration employees must successfully complete training related to the Compliance and Integrity Program, as well as compliance elements that are key in the effective conduct of their position. Additionally, all employees must be educated and periodically made aware of the ways to report suspected

misconduct. During this FY20 Q3, a new Learning Management Service (LMS) application was implemented. Employees completed two mandated training modules.

- **Open Communications**
All UNT System Administration employees must not only be aware of, but also understand the rules that govern their respective roles and the values underpinning UNT World. Stakeholders, both, internal and external, need assurances that UNT System Administration is committed to ethical and responsible behavior. Communication is key to a culture of compliance. During FY20 Q3, members of the UNT System Administration community were notified of training requirements, provided daily COVID-19 virus pandemic updates, and encouraged to tap into a host of resources to address concerns about working remotely and sheltering in place. The Office continues to work closely with Communications to provide timely compliance information.
- **Monitoring and Auditing**
UNT System Administration is committed to continuous monitoring by implementing internal controls that allow for early detection and remediation of non-compliance within an organization. Audit activities serve to help ensure that operational management has in place internal controls that do not improperly bias the assessment of business processes. During FY20 Q3, Internal Audit performed several audits of UNT System Administration operations. These audit activities serve to help ensure that operational management has in place internal controls that do not improperly bias the assessment of business processes.
- **Enforcement Tools**
UNT System Administration, through the Compliance and Integrity Program, incorporates measures that help ensure employees understand the consequences of engaging in unethical behavior or participating in non-compliant activities. This includes procedures for enforcing and disciplining employees who violate compliance standards or fail to report non-compliant activities. Disciplinary provisions equitably enforced are critical to the credibility and integrity of the Compliance and Integrity Program. Information about investigations. During this reporting period information about investigations are provided as progress of the annual Compliance Risk Work Plan included in this report.
- **Responsive Initiatives**
Keeping in mind that the Compliance and Integrity Program should be scalable, affordable, feasible, and enforceable, the UNT System Administration Office of Institutional Compliance evaluates the effectiveness of its Compliance and Integrity Program and the seven FSGOs on a regular basis. This evaluation also examines emerging compliance challenges. During FY20 Q3, a number of areas were reviewed to identify the need to incorporate new internal controls or enhance existing internal controls. Providing information to leadership that is relevant and timely is an on-going concern as this Office continues its efforts to identify and communicate emerging compliance to not only key stakeholders, but all members of the UNT System community. The COVID-19 virus pandemic has served to assist toward meeting this objective.

Compliance Risk Work Plan FY20 Q3 Progress

Risk Focus Area Updates

- Allegations/Whistleblowers

Risk Focus Area: Allegations/Whistleblowers					
Commitment & Focus: Verify allegations are being processed in accordance with applicable federal and state regulations, as well as applicable Regental and system-wide guidance. Verify System Administration has in place programs to provide staff the means to report concerns without fear of retaliation.					
Outcome Metrics/Tracking Indicators		Progress			
		Q1	Q2	Q3	Q4
1.	Review System Administration grievance procedures and processes for addressing discrimination concerns.	█	█	█	
2.	Title IX: Review policy and adjudication frameworks and implement local changes, as needed.	█	█	█	
3.	Review System Administration policies, procedures, protocols, and best practices for whistleblower complaints.	█	█	█	
4.	Determine means to foster better coordination and collaboration throughout UNT World.	█	█	█	
5.	Review current complaint processes to assess whether investigations are thorough, complete, timely, and fair.	█	█	█	
6.	Provide periodic status reports to senior leadership.	█	█	█	

- Emergency Management/Business Continuity Planning

Risk Focus Area:	Emergency Management/Business Continuity Planning																				
Commitment & Focus:	Provide leadership with educational and informational opportunities to prepare in effectively responding to emergencies. Draft and implement business continuity plans to build and maintain the UNT Dallas Contingencies of Operations (COOP) for submission to the State Office of Risk Management (SORM).																				
Outcome Metrics/Tracking Indicators	<table border="1"> <thead> <tr> <th></th> <th colspan="4">Progress</th> </tr> <tr> <th></th> <th>Q1</th> <th>Q2</th> <th>Q3</th> <th>Q4</th> </tr> </thead> <tbody> <tr> <td>1. Review, update, and execute Emergency Management Plan.</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2. Draft and implement a plan to build and maintain System COOP for submission to SORM.</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Progress					Q1	Q2	Q3	Q4	1. Review, update, and execute Emergency Management Plan.					2. Draft and implement a plan to build and maintain System COOP for submission to SORM.				
	Progress																				
	Q1	Q2	Q3	Q4																	
1. Review, update, and execute Emergency Management Plan.																					
2. Draft and implement a plan to build and maintain System COOP for submission to SORM.																					

• Physical Infrastructure/Conditions & Maintenance

Risk Focus Area:	Physical Infrastructure/Conditions & Maintenance																				
Commitment & Focus:	Verify UNT System Administration has effective processes and decision support methods in place to address prioritization and impact on facilities maintenance, including new construction and renovations.																				
Outcome Metrics/Tracking Indicators	<table border="1"> <thead> <tr> <th></th> <th colspan="4">Progress</th> </tr> <tr> <th></th> <th>Q1</th> <th>Q2</th> <th>Q3</th> <th>Q4</th> </tr> </thead> <tbody> <tr> <td>Review and assess current protocols, decision support methods, and metrics that address prioritization of</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>• physical infrastructure, including maintenance requirements that support on-going and emerging operational requirements, as well as emerging business development opportunities.</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Progress					Q1	Q2	Q3	Q4	Review and assess current protocols, decision support methods, and metrics that address prioritization of					• physical infrastructure, including maintenance requirements that support on-going and emerging operational requirements, as well as emerging business development opportunities.				
	Progress																				
	Q1	Q2	Q3	Q4																	
Review and assess current protocols, decision support methods, and metrics that address prioritization of																					
• physical infrastructure, including maintenance requirements that support on-going and emerging operational requirements, as well as emerging business development opportunities.																					

• Policy Management Initiative/Updates

Risk Focus Area:	Policy Management																																													
Commitment & Focus:	System Administration and each institution must have in place policies and procedures that comply with federal and state laws and regulations and provide guidance to employees. The system developed to implement these policies must be clear and efficient.																																													
Outcome Metrics/Tracking Indicators	<table border="1"> <thead> <tr> <th></th> <th colspan="4">Progress</th> </tr> <tr> <th></th> <th>Q1</th> <th>Q2</th> <th>Q3</th> <th>Q4</th> </tr> </thead> <tbody> <tr> <td>Promote an active culture of compliance in accordance with the System Administration CIP, System Administration is:</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>• a. updating policy on policies.</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>b. drafting standard review protocol.</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>c. drafting standard policy template.</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>d. developing and executing a comprehensive review of regulations and policies.</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>e. purchasing and installing new policy management system.</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>f. reviewing and revising website resources that provide for easier accessibility, as well as links to resources.</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Progress					Q1	Q2	Q3	Q4	Promote an active culture of compliance in accordance with the System Administration CIP, System Administration is:					• a. updating policy on policies.					b. drafting standard review protocol.					c. drafting standard policy template.					d. developing and executing a comprehensive review of regulations and policies.					e. purchasing and installing new policy management system.					f. reviewing and revising website resources that provide for easier accessibility, as well as links to resources.				
	Progress																																													
	Q1	Q2	Q3	Q4																																										
Promote an active culture of compliance in accordance with the System Administration CIP, System Administration is:																																														
• a. updating policy on policies.																																														
b. drafting standard review protocol.																																														
c. drafting standard policy template.																																														
d. developing and executing a comprehensive review of regulations and policies.																																														
e. purchasing and installing new policy management system.																																														
f. reviewing and revising website resources that provide for easier accessibility, as well as links to resources.																																														

Investigation Summary Log (March - May 2020)

Source					
Type/Period	03-2020	04-2020	05-2020	YTD	%
Anonymous	3	0	2	5	83%
Identified	0	0	1	1	17%
Intake Method					
Type/Period	03-2020	04-2020	05-2020	YTD	%
TrustLine Web	3	0	2	5	83%
Other Means	0	0	1	1	17%
Issue Type Summary (If Multiple, Predominate Cited)					
Type/Period	03-2020	04-2020	05-2020	YTD	%
Environmental/Safety Matters	3	0	0	3	50%
Misuse of Resources	0	0	0	0	0%
Inappropriate Communications	0	0	0	0	0%
Discrimination	0	0	3	3	50%
Outcome					
Type/Period	03-2020	04-2020	05-2020	YTD	%
In Progress	0	0	3	3	50%
Closed	3	0	0	3	50%
Open	0	0	1	3	50%

Emerging Risks**Resources in Assessing the Impact of COVID-19**

UNT System Administration is vigilant and actively monitoring the impact of the COVID-19 virus pandemic, within and throughout the system and the respective local communities. Below are two resources to assist in assessing the impact of COVID-19. The first focuses on federal compliance concerns. The second provides guidance to Institutions of Higher Education in Texas.

Federal Guidance

- [Department of Education's DeVos Announces \\$3 Billion Relief Grant for Governors](#)
- [Higher Education Relief in the CARES Act](#)
- [COVID-19 and Higher Education: Handling Title IX Issues in the Wake of the Pandemic](#)
- [COVID-19 Resources and Guidance for Higher Education Institutions](#)
- [COVID-19 and Considerations for Construction Projects in Higher Education](#)
- [In Midst of COVID-19, Universities Must Remain Compliant with Clery Act](#)
- [Immigration Considerations in Higher Education in Response to COVID-19](#)
- [US Department of Education Issues COVID-19 Guidance: The Impact on Federal Student Financial Aid Programs](#)

State Guidance

[Visit Coronavirus Update for Higher Education](#)

UNT System Administration Compliance & Integrity Program (2020)

System Administration Oversight and Accountability

Chancellor Lesa Roe

System Administration Chief Compliance Officer

Tim Willette

Chancellor's Cabinet/

Institutional Executive Compliance Committee

Rosemary Haggett, VC-Academic Affairs & Student Success	Dan Tenney, VC-Finance/Chief Financial Officer	Steve Maruszewski, VC-Facilities Planning & Construction
Barbara Abercrombie, VC-OE/Chief Human Capital Officer	Jack Morton, VC-Govt Relations & Policy Operations	Alan Stucky, VC-General Counsel
Chris McCoy, Chief Information Officer	Interim Sheba Joyner Chief Audit Executive	Paul Corliss, Chief Communications Officer
		Tim Willette, Chief Compliance Officer

Compliance Coordinating Committee(s)

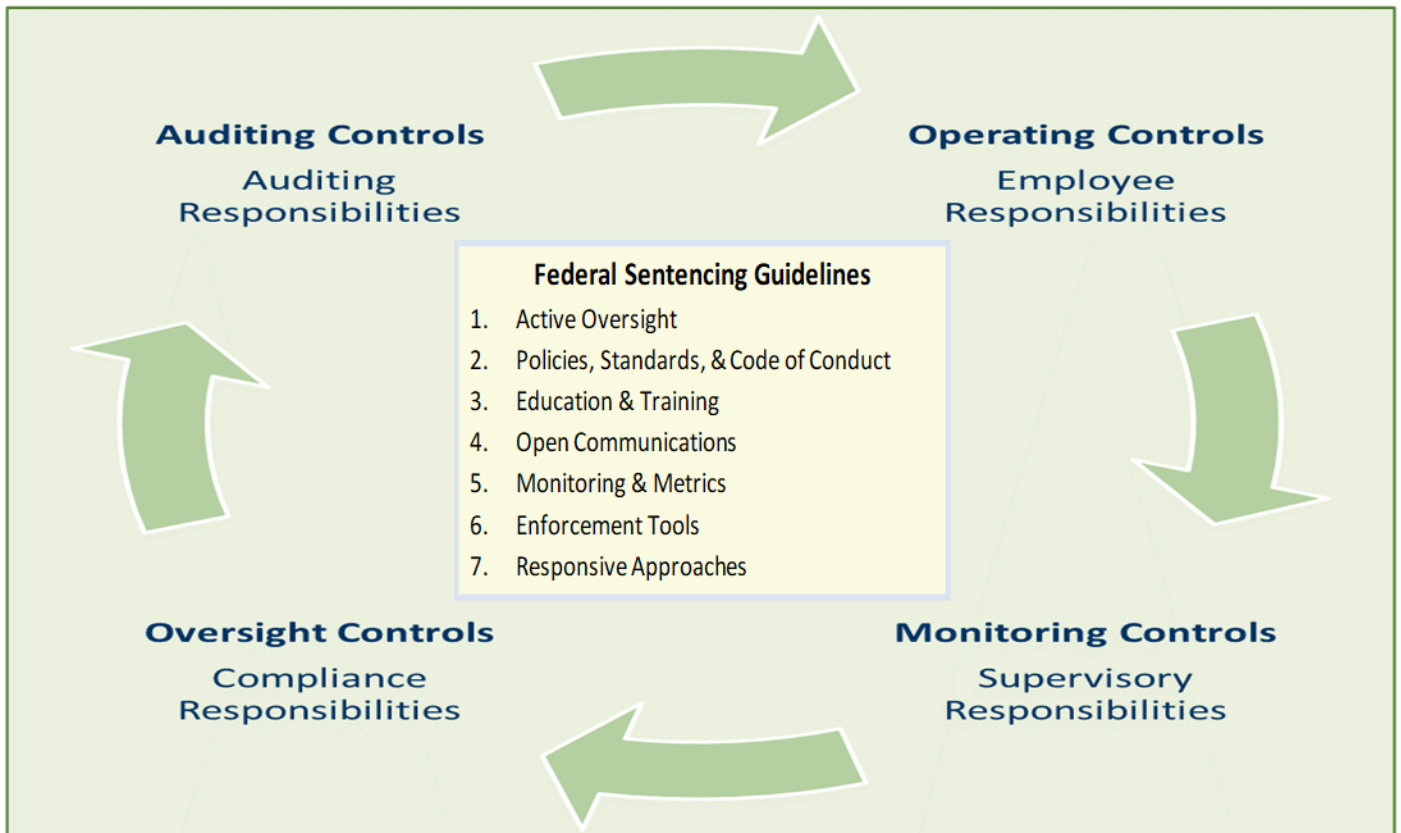
Employee Training & Development

Monitoring & Auditing

Investigations & Reporting

Principles of Community/Code of Conduct/Policies & Procedures/Standards

Day-to-Day Operations/Preventive & Corrective Efforts/Works In Progress/Emerging Concerns





UNIVERSITY OF NORTH TEXAS®

UNIVERSITY COMPLIANCE AND
ETHICS

QUARTERLY COMPLIANCE REPORT

3RD QUARTER FY20

SUBMITTED BY

CLAY SIMMONS
CHIEF COMPLIANCE OFFICER

OVERVIEW

FY2020 Compliance Workplan Projects and Deliverables	Target
Implement required training for all employees through Bridge LMS	Q2
Develop metrics that effectively measure key aspects of the compliance and ethics program	Q4
Develop tool for reporting CEP metrics to ECC and Board	Q4
Complete Ethics and Compliance training module	Q4
Work with HR to develop training module on frequent compliance-related management issues (e.g. FMLA, ADA, etc.)	Q4
Engage UBSC in internal marketing campaign for trust line and compliance program, including revisions/additions to website	Q4
Revise all UCE policies and support other offices in at least 3 major policy revisions	Q4
Conduct and complete annual risk assessment	Q3

Not started	On time	Delayed	Will Miss Target	Complete
-------------	---------	---------	------------------	----------

INTRODUCTION

UNT University Compliance and Ethics (“UCE”) continued to make progress with improvements to the compliance and ethics program and to address compliance risk priorities. However, the university’s response to COVID-19 pandemic diverted substantial effort into immediate response activities and progress will be hindered. Some planned projects will most likely not be met this fiscal year.

Additionally, two major risk areas have emerged and are taking more UCE attention. The first is the release of the Department of Education’s Final Rule on Title IX compliance. This sweeping regulatory change will impact many areas on campus and present new challenges to several university units. UCE is assisting with oversight of this risk area and will continue to do so after the new related policies are implemented. The other major emerging risk is international regulatory compliance, which encompasses export controls, immigration regulations, international travel, foreign gifts and contracts,

and other related issues. As the United States government continues to increase regulations on foreign governments, especially China, more regulatory attention is coming to bear on university activities with Chinese institutions and nationals. UCE will be working to ensure university compliance with regulations in this area and education for university personnel on their responsibilities related to international activities.

EXECUTIVE SUMMARY

- UCE has seen a decrease in TrustLine calls this quarter which is attributed to the move to remote work by most of the workforce due to the COVID-19 pandemic.
- Compliance-owned policy review and development is on hold, and will miss its target completion date, while UCE assists with pandemic-related policy exceptions and assisting with the implementation of policies related to high risk issues.
- We have finished planning for a HIPAA compliance review of UNT covered components.
- We have completed our annual Compliance Risk Assessment for FY2021 and presented the new risk areas to the university's Executive Compliance Committee. The new risk items will be presented to the Board in November due to a schedule change requested by the Chair of the Audit and Finance Committee.
- We continue to make progress on our FY20 Risk Assessment plan. UNT's Youth protection program has moved into green status due to the completion of the university's policy on Youth Programs, the outreach conducted by the Youth Protection office, and the closure of all in-person youth programs due to the pandemic. Please note that there is expected change in progress of all risks in the upcoming quarters because of shift in priorities due to COVID-19.

COMPLIANCE PROGRAM

Policies and Procedures

Although the office of University Compliance and Ethics (UCE) is not responsible for policy management at UNT, we are highly involved in all aspects of policy due to our oversight of compliance issues. Additionally, our office has extensive experience in the application of policies across the institution, which make us valuable as an oversight function. Because of this, our office was charged with maintain and tracking policy exceptions necessitated by the university's response to COVID-19. Twelve policy exceptions were made in the quarter, including exceptions to the details of faculty reappointment, tenure and promotion to allow tenure track faculty an additional time to conduct research for tenure purposes, and exceptions to the university's policy on telecommuting to

UNT 3rd Quarter Compliance Report

allow employees to work from home. Major exceptions were published on the university's policy page to inform employees of the changes.

One major deliverable for UCE this year was to revise all UCE-owned policies and assist other offices revise at least three major policies. UCE will not be able to revise all UCE-owned policies this year. COVID-19 has taken over 70% of the office's time in the last three months, precluding our office from reaching this goal. However, the office led efforts to amend the System Compliance and Integrity Program Regulation, which will allow for some desired policy changes at the university level in the future. The Regulation is currently under review by OGC. UCE did meet the goal of assisting other offices revise three major policies.

Compliance Officer and Compliance Committee

The UNT executive compliance committee met in May. Topics discussed included the FY2021 Compliance Risk Assessment, required training for employees, changes to federal rules on Title IX and Foreign Gifts and Contracts. UCE also reported on Trust Line activity and related issues.

Education and Training

UCE continued to develop Ethics and Compliance training for all UNT employees. This training module is slated to be completed by the end of the fiscal year and rolled out to all employees in fall 2020. This effort may be delayed by the COVID-19 pandemic response.

Effective Communication/Trust Line

UCE received eleven Trust Line calls/inquiries during the 3rd quarter: a 42% decrease from the 2nd Quarter. This is most likely the result of almost all employees working from home for most of the quarter. Of the eleven reports received, seven were closed, one is pending closure, while three remain under review with the appropriate units. All compliance reports and inquiries were referred to the appropriate unit for investigation and consideration. Once reports are referred for investigation, UCE retains oversight of the investigation and obtains periodic updates from the investigatory unit until it is completed. All non-compliance reports received via the Trust Line were referred to the appropriate units for follow-up with the reporting party, if possible.

UNT 3rd Quarter Compliance Report

Auditing and Monitoring

UCE began its work to review all HIPAA covered components at UNT for compliance with UNT's HIPAA policy and the law itself. UCE created a set of surveys which will be sent to all Vice Presidents and Deans who may have HIPAA covered components in their portfolios. The surveys will provide UCE with additional information for existing and emerging covered components. UCE will then proceed to meet with leadership in these areas and conduct a review of each covered component's HIPAA privacy and security program to ensure it meets university standards. UCE is working closely with the Office of General Counsel and other offices to ensure compliance in this important area.

UCE is also working closely with UNT Asset Protection to plan for an Asset Protection review of inventory and P-card purchases during the summer.

Disciplinary Guidelines

No new information to report this quarter

Response and Corrective Action

UCE, along with Asset Protection, continued its effort to assist university units respond to and implement recommendations made by Internal Audit or other regulatory agencies.

FY20 RISK ASSESSMENT- Q3 PROGRESS

The University’s response to the COVID-19 pandemic may require changes in risk priorities. Currently, UCE is shifting its work to attend to policy exceptions, business continuity, data protection, health and safety, ethics and culture, and other topics.

UCE completed the FY2021 Compliance Risk Assessment in the 3rd Quarter of 2020. The Risk Assessment was timed to allow UCE’s input into UNT System Internal Audit’s Risk Assessment, and we achieved that goal. The new Compliance Risk Assessment will be presented in the 1st Quarter 2021 Report.

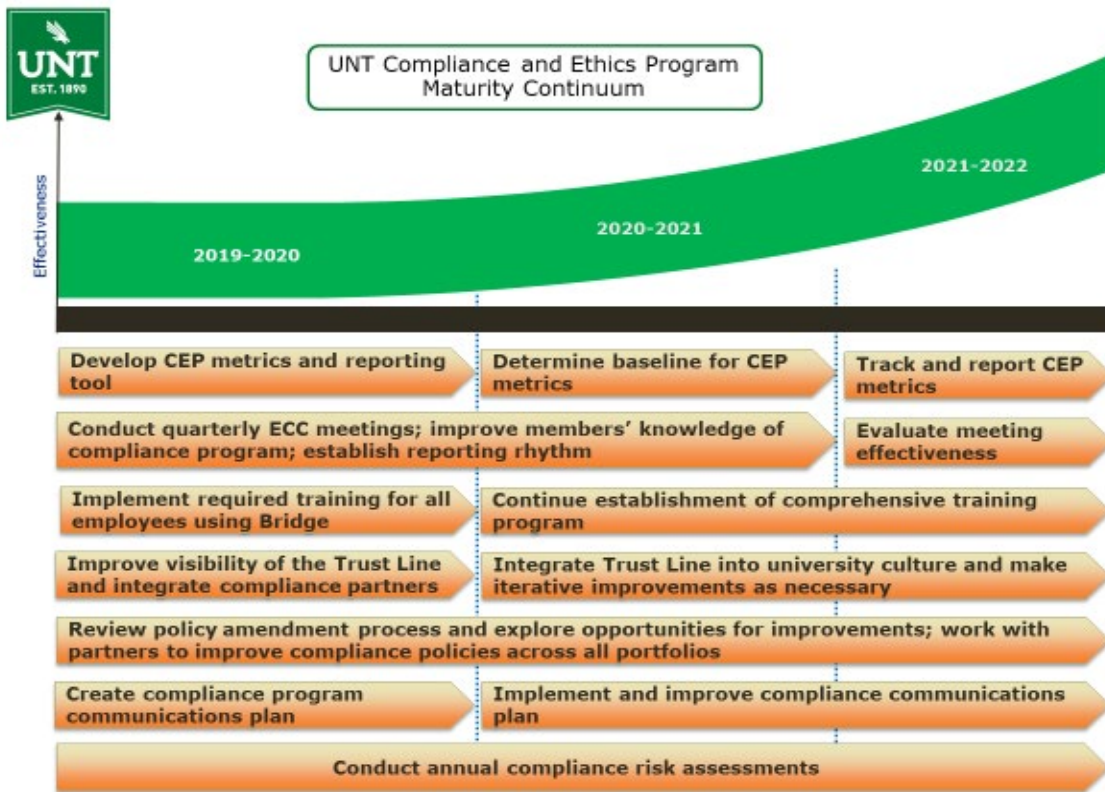
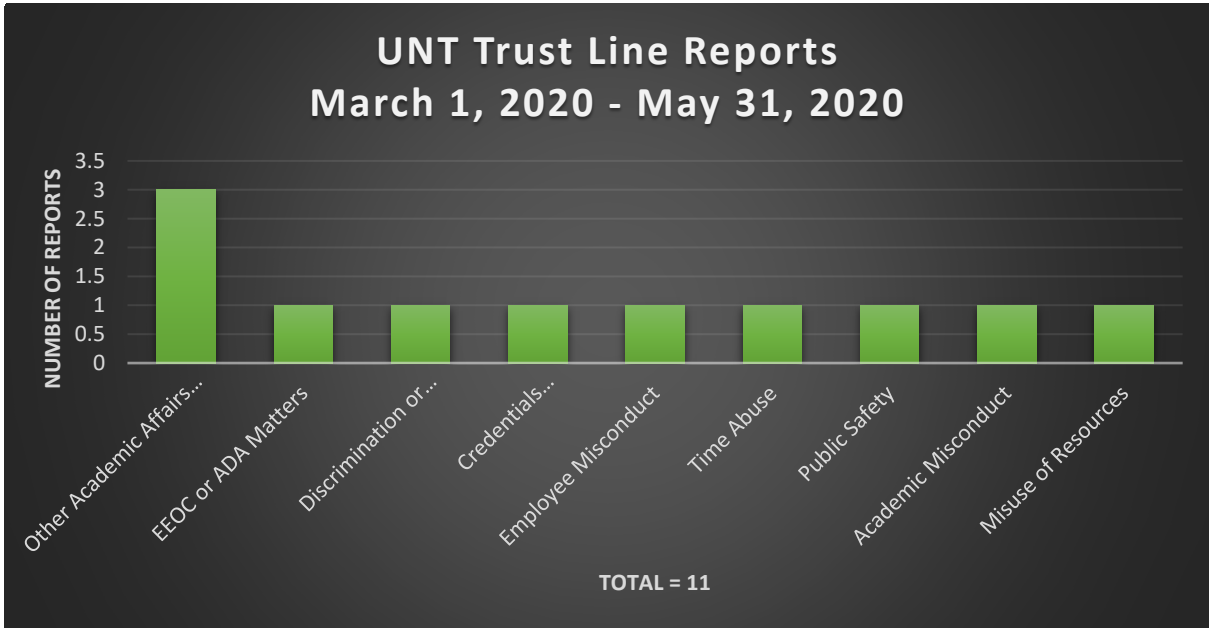
Identified Risk	Q1	Q2	Q3
Accessibility of online programs			
Conflicts of interest & commitment			
Employee training			
Hazardous materials transportation and disposal			
Information technology systems confidentiality, integrity, and availability			
UNT programs involving minors			
Research compliance program			
Time and effort reporting			
Title IX compliance & prevention of sexual discrimination and violence			
University policies			

ADDITIONAL CAMPUS INFORMATION

A. COVID-19 Response

UCE has been heavily involved in the university’s COVID-19 response, working with policy, safety, research, and athletics groups to modify work and learning environments on campus. This heavy volume of work will most likely lead to missed goals for this fiscal year. This is particularly probable for activities that rely on partner units across the university for additional support or involvement as those units are also heavily tasked with COVID-19 activities.

ASSOCIATED CHARTS/APPENDIX





OFFICE OF
INSTITUTIONAL COMPLIANCE AND INTEGRITY

QUARTERLY COMPLIANCE REPORT

3RD QUARTER FY20

SUBMITTED BY

DESIREE K. RAMIREZ, CCEP, CHC
CHIEF COMPLIANCE AND INTEGRITY OFFICER

OVERVIEW

FY2020 Compliance Workplan Projects and Deliverables	
Create Policy and Procedure Strategy for campus	Q4
Evaluate, evidence and benchmark ethical culture and principled performance	Q4
Completion of Compliance Effectiveness Scorecard	Q4
Compliance Workplan Control Assessments	Q4
Launch Student Integrity Education	Q3
Develop Campus Re Entry Training	Q3

Not started	On time	Delayed	Will Miss Target	Complete
-------------	---------	---------	------------------	----------

INTRODUCTION

Accountability with Grace... this is how the Office of Institutional Compliance and Integrity has assisted the institution in navigating the changing guidance regarding COVID-19 and bringing our campus back safely and efficiently. From sanitation to mask requirements, educating our employees and students and incorporating our values have been key to the re-entry efforts. The department continues to monitor not only CDC guidance, but guidance from the Centers for Medicare and Medicaid services in billing for telehealth, the Office of Civil Rights in relation to HIPAA rule and regulations and complying with details of the CARES Act. This pandemic will undoubtedly impact the functions of the Compliance Program and the role of the Compliance Officer; chartering a pivotal course for changes in policy, education and institutional culture.

EXECUTIVE SUMMARY

- Employees continued to complete their training throughout the pandemic with an average completion rate of 80% for the third quarter.
- There were 11 TrustLine calls this quarter; volume of concerns/inquiries were 50% less than last quarter.
- Routine audit of the Pediatric practice as a well as a focused audit of the new OB/GYN practice was conducted in this quarter.
- HIPAA education was provided to leadership and the clinical practice regarding reporting COVID-19 results to first responders
- Re Entry Training was created by the Office of Institutional Compliance and Integrity in collaboration with our Safety Office, Research and our clinical practice group. The education captured CDC guidance as well as basic safety precautions and HSC values as guidance in making decisions to interact with reentering staff and students to campus.

COMPLIANCE PROGRAM

Policies and Procedures

The Policy Transformation project is coming to a completion with a total of 81 revised/updated policies. The compliance staff is working with the Office of General Counsel to complete the final legal sufficiency review. Some policies have already been approved in order to meet federal requirements as well as operational initiatives. A crosswalk of the 415 policies and procedures will be provided to the campus in August with an implementation date of September, 2020.

Compliance Officer and Compliance Committee

No updates to report

Education and Training

New employees continued to complete their Integrity Education suite throughout the pandemic. Student training was launched in late May and will continue until September. Current plans are underway to launch employee training in the fall. Additionally, Research Conflict of Interest training is being evaluated to add to the Integrity Education suite to be assigned specifically to research faculty. *(please reference chart in appendix)*

Effective Communication/Trust Line

HSC received 11 **Trust Line calls/inquiries** during the 3rd quarter; a 50% decrease from the 2nd Quarter. The main theme around the calls were varying concerns regarding remote work and COVID-19 safety in the early part of the pandemic. These concerns were addressed as information, plans and processes were put into place on the campus. *(please reference chart in appendix)*

Auditing and Monitoring

In this quarter, 13 providers were audited in the Department of Pediatrics and OB/GYN. The OBGYN audit was a focused audit which is part of the compliance program process when new providers come into the practice. The audits showed accuracy rates for both practices averaging around 95%- this shows that the provider is documenting the services they provide and bill for accurately; resulting in less documentation errors and quicker reimbursement. Some areas for improvement are:

- Over/under Coding
- Incomplete documentation
- Incorrect Evaluation and Management category (new versus established patient)

The clinical practice overall continues to improve from quarter to quarter.

Disciplinary Guidelines

No new information to report this quarter

Response and Corrective Action

No new information to report this quarter

FY20 RISK ASSESSMENT- Q3 PROGRESS

The Office of Institutional Compliance and Integrity is in the process of completing the Control Activities and Assessment reports for the FY2020 Workplan. Compliance Workplan activities will be reassessed to not conflict with current risk evaluation by the ITS department. The compliance team is completing its FY21 Compliance Program Self-Assessment to evaluate any updates or changes needed to the compliance program and department operations. Additionally, we are working in collaboration with Internal Audit and the other Chief Compliance Officers to define areas of review in FY21 for risk associated with COVID-19.

Identified Risk	Q1	Q2	Q3
Campus Off boarding			
Unauthorized Access to Protected Institutional Data			<i>Reassessment to incorporate in ITS internal risk work plan</i>
HIPAA/HITECH			
Export Control (International Compliance)			
Conflict of Interest (Outside Employment)			

ADDITIONAL CAMPUS INFORMATION

A. Guidance on Telehealth

The Office of Institutional Compliance and Integrity assisted the clinical practice group in interpreting guidance from the Center for Medicare and Medicaid Services (CMS) regarding billing for telehealth and Residents. Under the Emergency Temporary Teaching Physician Regulations, CMS expanded the “Patients Over Paperwork” by providing guidance to Teaching Physician Facilities and enabling Residents to perform services through audio/video real-time communications technology. These services **do not** include surgical, high risk, interventional, or other complex procedures, services performed through an endoscope, and anesthesia services.

This temporary change allowed our providers to continue to educate our Residents in the clinical practice setting and assist them in the evaluation and management of patients utilizing telecommunication. Under Medicare guidelines, providers were not allowed to bill for supervision of Residents via telehealth. This change not only kept our patients safe, but it allowed continuation of care and no interruption in Resident education.

B. OCR Guidance regarding HIPAA and First Responders

The Office of Institutional Compliance and Integrity with assistance from the Office of General Counsel was able to provide education and guidance regarding HIPAA rules in relation to reporting COVID-19 test results for first responders.

In April, 2020, the HIPAA Privacy Rule permitted a covered entity to disclose the protected health information (PHI) of an individual who has been infected with, or exposed to, COVID-19, with law enforcement, paramedics, other first responders, and public health authorities without the individual's HIPAA authorization, in certain circumstances, including the following:

- When the disclosure is needed to provide treatment.
- When such notification is required by law.
- To notify a public health authority in order to prevent or control spread of disease.
- When first responders may be at risk of infection.
- When the disclosure of PHI to first responders is necessary to prevent or lessen a serious and imminent threat to the health and safety of a person or the public.
- When responding to a request for PHI by a correctional institution or law enforcement official having lawful custody of an inmate or other individual.

Even with this clarification, covered entities were still required to make reasonable efforts to limit the information used or disclosed. This information and education was crucial as HSC continued to be on the front lines of Tarrant County to assist our first responders, and to ensure our providers and clinical practice staff were aware of the how to report this information for their own health and safety and the health and safety of those we serve.

C. Campus Re Entry Training

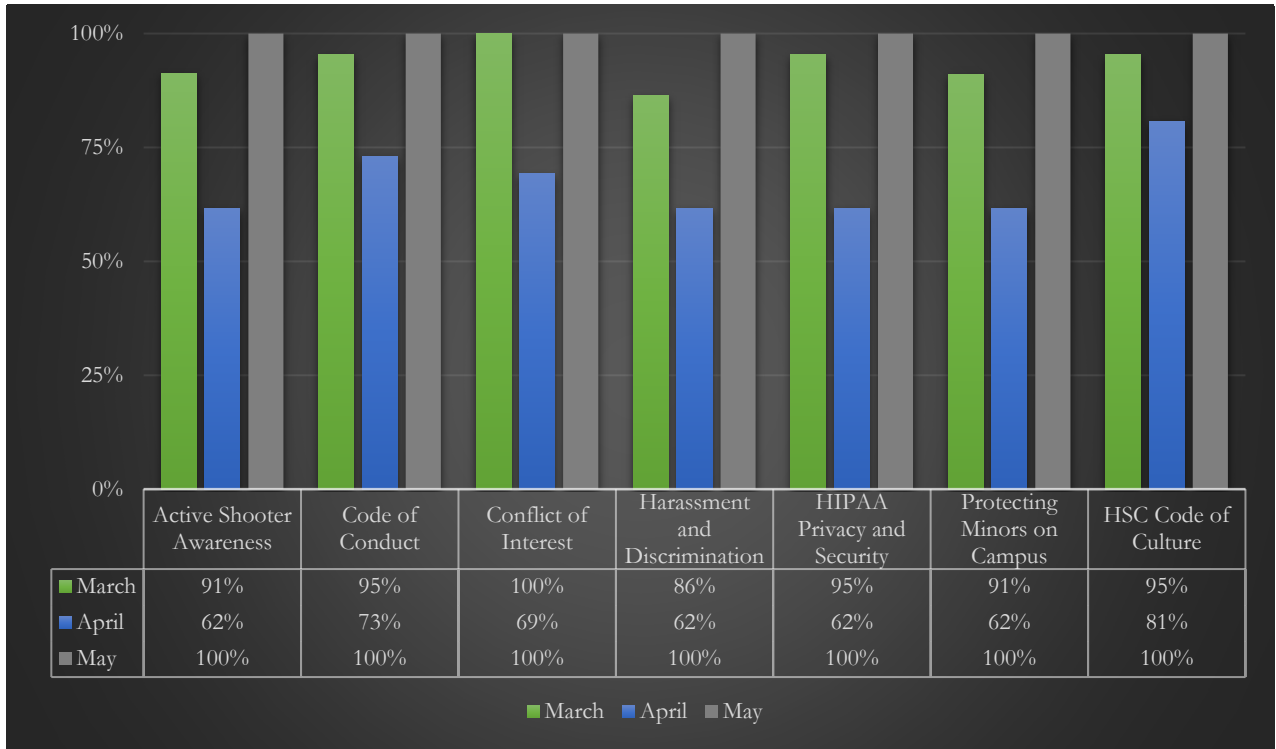
The Office of Institutional Compliance and Integrity created the training for Campus Re Entry utilizing the expertise of our Safety Office, Research Division and Clinical Practice group in accordance with CDC guidelines. The training outcomes included:

- Ways to work safely
- How to prevent the spread of COVID-19
- How to protect yourself from COVID-19
- Managing Stress during the pandemic

All students and staff are required to complete the training and present their Certificate of Completion before returning to campus; all essential workers are also required to complete the training. Updates will be made to accommodate any major changes in guidance.

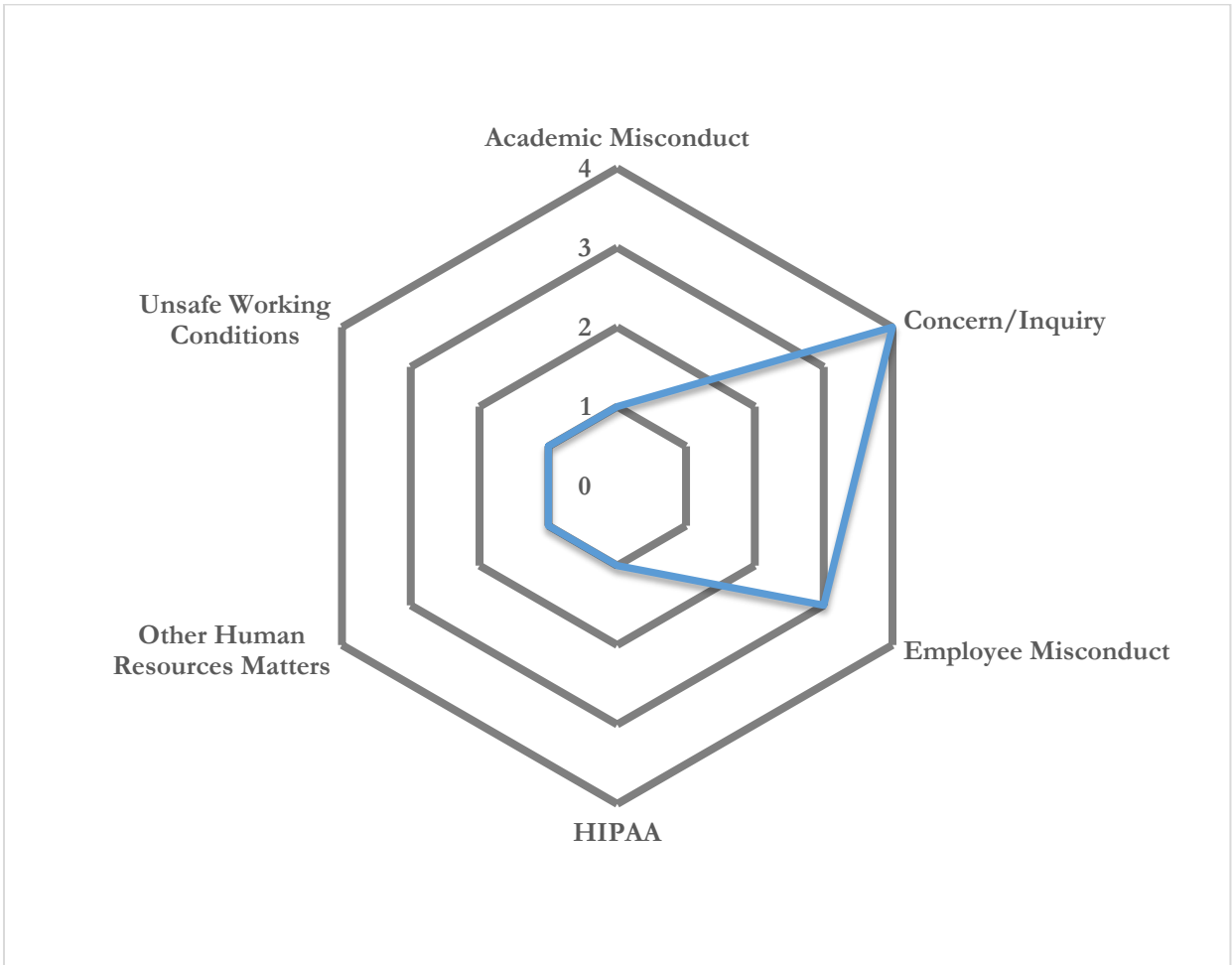
ASSOCIATED CHARTS/APPENDIX

Integrity Education Completion- Third Quarter



Please note: only 1 employee was assigned training during the month of May

Trust Line Issue Summary- Third Quarter



UNT | DALLAS™

UNIVERSITY OF NORTH TEXAS AT DALLAS

OFFICE OF INSTITUTIONAL COMPLIANCE

QUARTERLY COMPLIANCE REPORT 3RD QUARTER FY20

SUBMITTED BY
TIM WILLETTE
CHIEF COMPLIANCE OFFICER



BOARD OF REGENTS MEETING
AUGUST 13th & 14th, 2020

Unless Otherwise Noted: Activities reflected are as of May 31st, 2020

Introduction

At UNT Dallas, the Office of Institutional Compliance (Office) provides centralized oversight and substantive support toward the ethical, lawful, and responsible conduct of all operations. The Office identifies and analyzes a wide range of existing and emerging compliance concerns. It works closely with key campus stakeholders to foster a culture of compliance that supports the mission of the University. This requires a resilient partnership between the CCO and each of the organizational leaders who serve on the President's Cabinet. The organizational structure of the UNT Dallas Compliance & Integrity Program is provided in Appendix A.

Executive Summary

This quarterly report provides a summary and highlights of compliance activities that have taken place during the third quarter (Q3) of Fiscal Year 2020 (FY20) at UNT Dallas. It is divided into six sections.

- Introduction
- Executive Summary
- Compliance Integrity Program
- FY20 Q3 Compliance Risk Work Plan Progress
- FY20 Q3 Investigations
- Emerging Risks

Compliance & Integrity Program

The Office of Institutional Compliance at UNT Dallas is responsible for maintaining an effective Compliance and Integrity Program (Program) that includes, but is not limited to: 1) serving as a resource for addressing compliance concerns and communicating emerging risks; 2) facilitating the identification, prioritization, and mitigation of compliance risk focus areas; 3) assisting in determining risk mitigation strategies and how to assess their effectiveness; 4) reviewing policies and procedures; 5) assisting in identifying and monitoring training requirements; and 6) helping with the implementation of corrective actions, as appropriate. The Program identifies, assesses, monitors, oversees, and helps ensure that all UNT Dallas operations comply with applicable laws and regulations, Regents Rules, System Regulations, and campus policies. The CCO is responsible for the effective implementation and management of the Compliance and Integrity Program.

During FY20 Q3, the CCO continued reviewing and assessing the effectiveness of the campus Compliance and Integrity Program per the guidance provided in UNT System Regulation 02.1000; *Compliance and Integrity Program*, dated 10/17/2017, as well as using the seven Federal Sentencing Guideline Objectives (FSGOs) listed below as measures, specifically identifying areas for improvement.

- **Active Oversight**
All members of the President's Cabinet are kept current on the overall effectiveness of the campus Compliance and Integrity Program. The CCO provides quarterly updates of the annual Compliance Risk Work Plan to senior leadership team. Meeting weekly, the members of the President's Cabinet are actively engaged in identifying, communicating, and assessing emerging risks. Their commitment to fostering a culture of compliance is pervasive throughout all operations at UNT Dallas. In their roles as campus leaders, they encourage ethical behavior by all who serve the University. The President's Cabinet have been provided updates on the five risk focus areas throughout this reporting quarter.
- **Policies, Standards, and Code of Conduct**
UNT Dallas is committed to the implementation and maintenance of policies that facilitate the detection and prevention of unethical and illegal conduct at the University. These policies promote integrity, principled behavior, and compliance with federal and state laws, Regents Rules, System Regulations, and the standards of all applicable accrediting bodies. During FY20 Q3, several UNT Dallas policies were reviewed and are in the process of being updated. This effort is being overseen of the Chief Compliance Officer. Additionally, UNT Dallas is transitioning over to a new policy management system. The Policy Tech application is being prepared for use by UNT Dallas. Policy migration should take place sometime in August of 2020.
- **Education and Training**
All UNT Dallas employees must successfully complete training related to the Compliance and Integrity Program, as well as compliance elements that are key in the effective conduct of their position. Additionally, all employees must be educated and periodically made aware of the ways to report suspected misconduct.

During this FY20 Q3, employees completed two mandated training modules. A new Learning Management System (LMS), Bridge, is now in place.

- **Open Communications**
All UNT Dallas employees must not only be aware of, but also understand the rules that govern, their respective roles and the values underpinning UNT World. Stakeholders, both, internal and external, need assurances that UNT Dallas is committed to ethical and responsible behavior. Communication is key to a culture of compliance. During FY20 Q3, the Office has worked closely with Communications to provide timely compliance information.
- **Monitoring and Auditing**
UNT Dallas is committed to continuous monitoring by implementing internal controls that allow for early detection and remediation of non-compliance within an organization. Audit activities serve to help ensure that operational management has in place internal controls that do not improperly bias the assessment of business processes. A number of audits took place during the FY20 Q3. The Office worked closely with key stakeholders on campus to ensure audit findings were addressed in a timely and an effective manner.
- **Enforcement Tools**
UNT Dallas, through the Compliance and Integrity Program, incorporates measures that ensure employees understand the consequences of engaging in unethical behavior or participating in non-compliant activities. This includes procedures for enforcing and disciplining employees who violate compliance standards or fail to report non-compliant activities. Disciplinary provisions equitably enforced are critical to the credibility and integrity of the Compliance and Integrity Program.
- **Responsive Initiatives**
Keeping in mind that the Compliance and Integrity Program should be scalable, affordable, feasible, and enforceable, the UNT Dallas Office of Institutional Compliance evaluates the effectiveness of its Program and the seven FSGOs on a regular basis. This evaluation also examines emerging compliance challenges. During FY20 Q3, a number of areas were reviewed to identify the need to incorporate new internal controls or enhance existing internal controls. Of particular note was the updating of Fraud Awareness training.

Compliance Risk Work Plan FY20 Q3 Progress

Risk Focus Area Updates

- Allegations/Whistleblowers

Risk Focus Area:	Allegations/Whistleblowers			
Commitment & Focus:	Verify allegations are being processed in accordance with applicable federal and state regulations, as well as applicable Regental, system-wide, and campus guidance. Verify campus has in place programs to provide students, faculty, and staff the means to report concerns without fear of retaliation.			
Outcome Metrics/Tracking Indicators	Progress			
	Q1	Q2	Q3	Q4
1. Review campus grievance procedures and processes for addressing discrimination complaints.				
2. Title IX: Review policy and adjudication frameworks and implement local changes, as needed.				
3. Review campus policies, procedures and protocols/practices for whistleblower complaints				
4. Determine means to foster better coordination and collaboration among campus units and system.				
5. Review current complaint processes to assess whether investigations are thorough, complete, timely, and fair.				
6. Provide periodic status reports to senior leadership.				

- Community Well-Being

Risk Focus Area:	Community Well-Being																														
Commitment & Focus:	Detect and prevent activities that compromise health and safety. Provide the campus and neighboring community with the support needed to nurture a sense of security and safety. Determine, provide, and distribute to members of the campus community the resources and support to effectively address existing and emerging health and safety concerns.																														
Outcome Metrics/Tracking Indicators	<table border="1"> <thead> <tr> <th></th> <th colspan="4">Progress</th> </tr> <tr> <th></th> <th>Q1</th> <th>Q2</th> <th>Q3</th> <th>Q4</th> </tr> </thead> <tbody> <tr> <td>1. Provide campus and local communities with the support to foster and maintain a safe environment.</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2. Promote campus awareness of VAWA, focusing on the safety of females on campus.</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3. Promote a culture of safety on campus that addresses all modes of transportation.</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4. Provide campus community with the resources and support to effectively address mental health concerns.</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Progress					Q1	Q2	Q3	Q4	1. Provide campus and local communities with the support to foster and maintain a safe environment.					2. Promote campus awareness of VAWA, focusing on the safety of females on campus.					3. Promote a culture of safety on campus that addresses all modes of transportation.					4. Provide campus community with the resources and support to effectively address mental health concerns.				
	Progress																														
	Q1	Q2	Q3	Q4																											
1. Provide campus and local communities with the support to foster and maintain a safe environment.																															
2. Promote campus awareness of VAWA, focusing on the safety of females on campus.																															
3. Promote a culture of safety on campus that addresses all modes of transportation.																															
4. Provide campus community with the resources and support to effectively address mental health concerns.																															

- Minors on Campus

Risk Focus Area:	Minors on Campus & University-Sponsored Activities																														
Commitment & Focus:	Comprehensive protocols must be in place with collaborative engagement to protect the health, safety, and welfare of minors on campus who are engaged in University-sponsored activities. Policies, protocols, and best practices, including training requirements, need to be monitored and reviewed on a routine basis, with updates, as needed.																														
Outcome Metrics/Tracking Indicators	<table border="1"> <thead> <tr> <th></th> <th colspan="4">Progress</th> </tr> <tr> <th></th> <th>Q1</th> <th>Q2</th> <th>Q3</th> <th>Q4</th> </tr> </thead> <tbody> <tr> <td>1. Create database for University-Sponsored activities of minors that monitors and tracks compliance requirements.</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2. Maintain and update, as necessary, campus guidance for University-Sponsored activities for minors.</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3. Assess protocols and practices, including required training, related to University-Sponsored activities for minors.</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4. Create and/or update websites involving Events Management and University-Sponsored activities for minors.</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Progress					Q1	Q2	Q3	Q4	1. Create database for University-Sponsored activities of minors that monitors and tracks compliance requirements.					2. Maintain and update, as necessary, campus guidance for University-Sponsored activities for minors.					3. Assess protocols and practices, including required training, related to University-Sponsored activities for minors.					4. Create and/or update websites involving Events Management and University-Sponsored activities for minors.				
	Progress																														
	Q1	Q2	Q3	Q4																											
1. Create database for University-Sponsored activities of minors that monitors and tracks compliance requirements.																															
2. Maintain and update, as necessary, campus guidance for University-Sponsored activities for minors.																															
3. Assess protocols and practices, including required training, related to University-Sponsored activities for minors.																															
4. Create and/or update websites involving Events Management and University-Sponsored activities for minors.																															

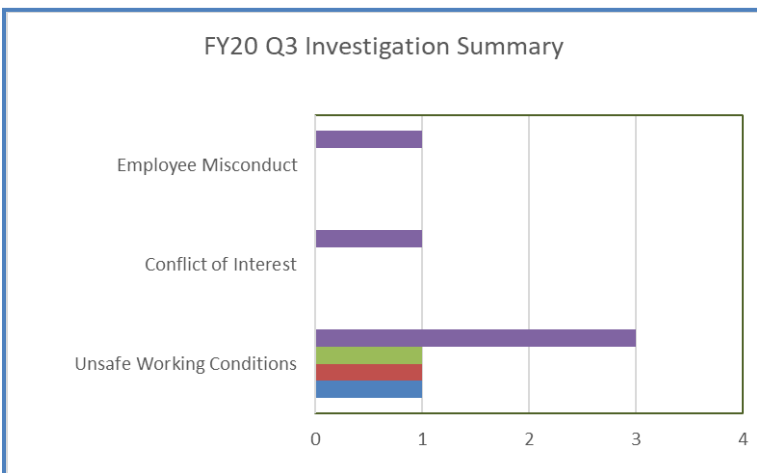
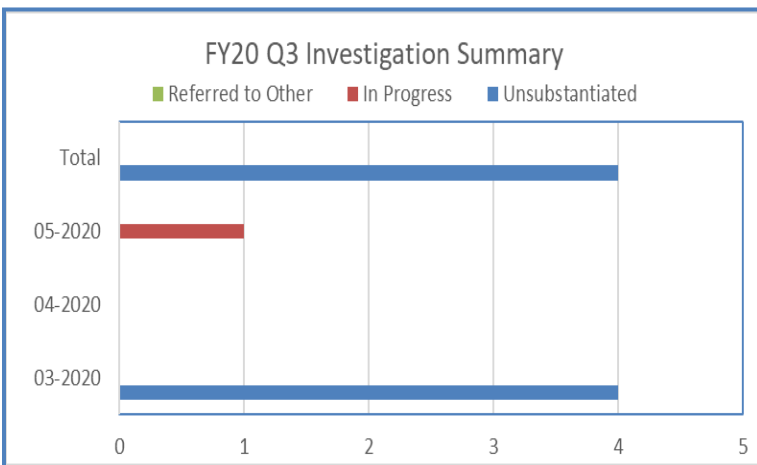
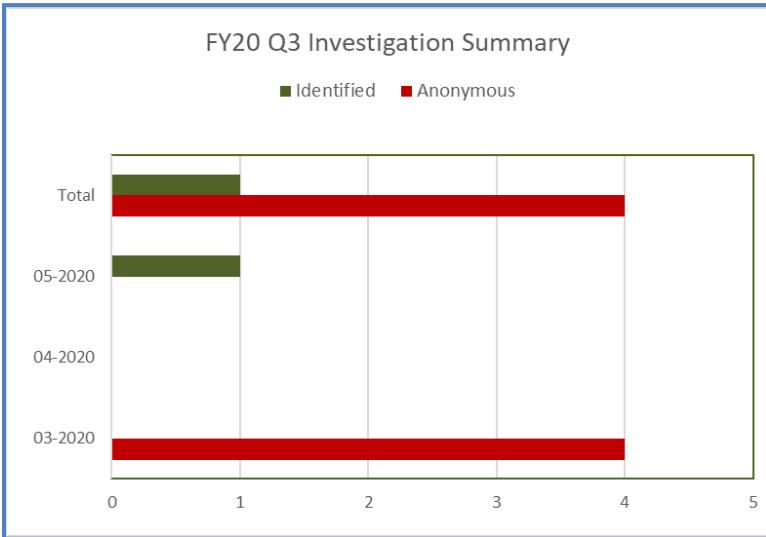
- Emergency Management/Business Continuity Plans

Risk Focus Area:	Emergency Management/Business Continuity Planning																				
Commitment & Focus:	Provide leadership with educational and informational opportunities to prepare in effectively responding to emergencies. Draft and implement business continuity plans to build and maintain and update the campus Contingencies of Operations (COOP) for submission to the State Office of Risk Management (SORM).																				
Outcome Metrics/Tracking Indicators	<table border="1"> <thead> <tr> <th></th> <th colspan="4">Progress</th> </tr> <tr> <th></th> <th>Q1</th> <th>Q2</th> <th>Q3</th> <th>Q4</th> </tr> </thead> <tbody> <tr> <td>1. Update COOP</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2. Submit COOP to SORM</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Progress					Q1	Q2	Q3	Q4	1. Update COOP					2. Submit COOP to SORM				
	Progress																				
	Q1	Q2	Q3	Q4																	
1. Update COOP																					
2. Submit COOP to SORM																					

- Physical Infrastructure/Conditions & Maintenance

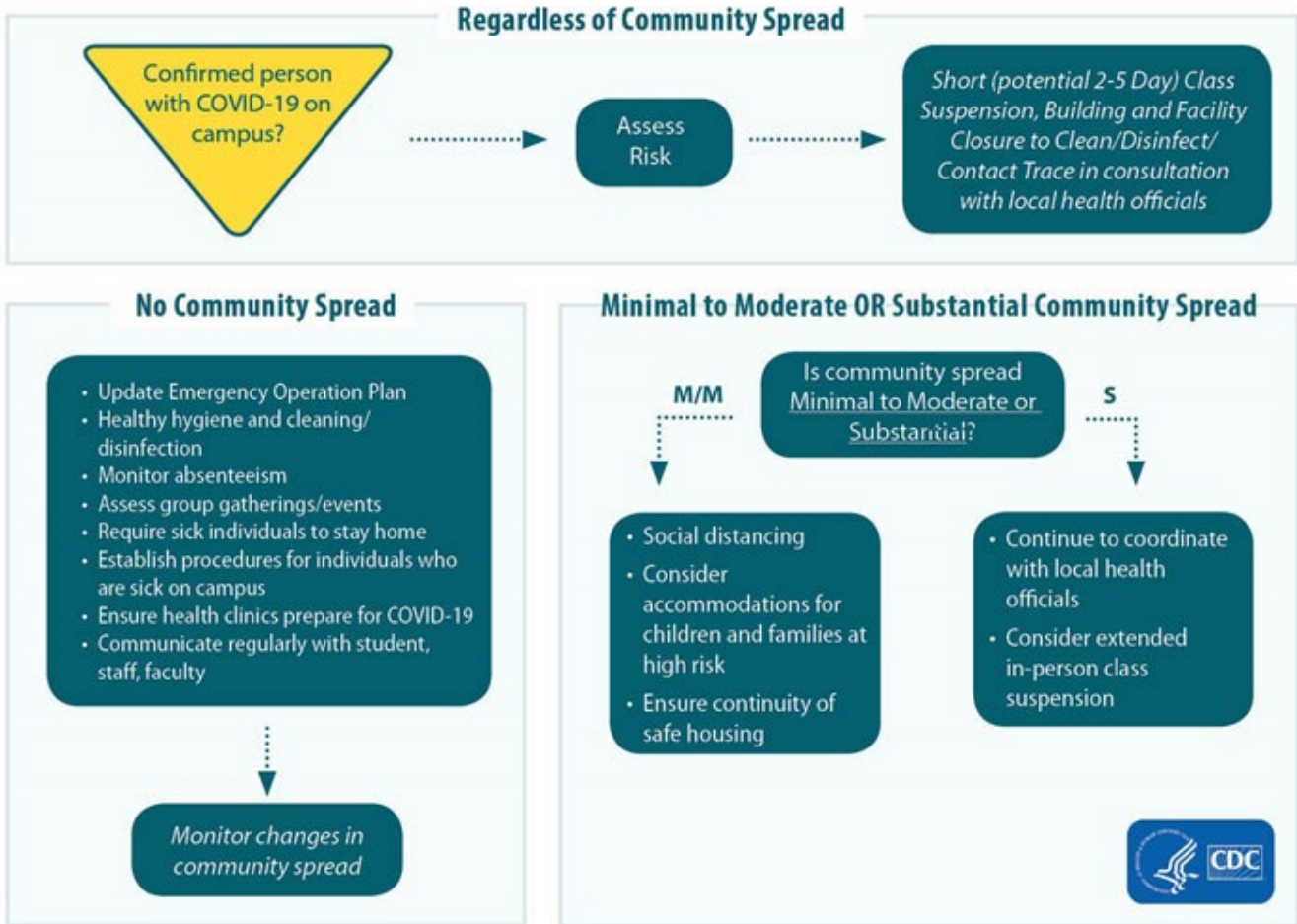
Risk Focus Area:	Physical Infrastructure/Conditions & Maintenance															
Commitment & Focus:	Verify campus has effective processes and decision support methods in place to address prioritization and assess the impact on facilities maintenance and services.															
Outcome Metrics/Tracking Indicators	<table border="1"> <thead> <tr> <th></th> <th colspan="4">Progress</th> </tr> <tr> <th></th> <th>Q1</th> <th>Q2</th> <th>Q3</th> <th>Q4</th> </tr> </thead> <tbody> <tr> <td>1. Provide the campus and local communities with the necessary support to foster and maintain a safe environment.</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Progress					Q1	Q2	Q3	Q4	1. Provide the campus and local communities with the necessary support to foster and maintain a safe environment.				
	Progress															
	Q1	Q2	Q3	Q4												
1. Provide the campus and local communities with the necessary support to foster and maintain a safe environment.																

Investigations FY20 Q3



UNT Dallas must remain vigilant and monitor for COVID-19 outbreaks in the local community and for individual exposure events to occur in facilities, regardless of the level of community transmission. The following decision tree, provided by the CDC, is a useful guide in helping UNT Dallas leadership determine which set of mitigation strategies may be most appropriate during this period of uncertainty.

Institutions of Higher Education (IHE) Decision Tree



Appendix A: Compliance & Integrity Program Organizational Overview

