



## TABLE OF CONTENTS FOR ACADEMIC AFFAIRS COMMITTEE

**Committee Meeting:** 4/30/2018

**Board Meeting:** 5/1/2018  
Houston, Texas

*Ernest Aliseda, Chairman*  
*Kevin P. Eltife*  
*Paul L. Foster*  
*R. Steven Hicks*  
*Janiece Longoria*  
*Rad Weaver*

	<b>Committee Meeting</b>	<b>Board Meeting</b>	<b>Page</b>
<b>Convene</b>	<i>1:00 p.m.</i> <i>Chairman Aliseda</i>		
1. <b>U. T. System Board of Regents: Discussion and appropriate action regarding Consent Agenda items, if any, assigned for Committee consideration</b>	<i>1:00 p.m.</i> <b>Discussion</b>	<b>Action</b>	<b>122</b>
2. <b>U. T. Tyler: Discussion and appropriate action regarding proposed revisions to the Mission Statement</b>	<i>1:02 p.m.</i> <b>Action</b> <i>President Tidwell</i>	<b>Action</b>	<b>123</b>
3. <b>U. T. Rio Grande Valley: Approval of preliminary authority for a Doctor of Pharmacy degree program</b>	<i>1:12 p.m.</i> <b>Action</b> <i>President Bailey</i>	<b>Action</b>	<b>125</b>
4. <b>U. T. Tyler: Approval to establish a Bachelor of Science degree program in Chemical Engineering</b>	<i>1:20 p.m.</i> <b>Action</b> <i>President Tidwell</i>	<b>Action</b>	<b>126</b>
<b>Adjourn</b>	<i>1:30 p.m.</i>		

1. **U. T. System Board of Regents: Discussion and appropriate action regarding Consent Agenda items, if any, assigned for Committee consideration**

RECOMMENDATION

The proposed Consent Agenda items assigned to this Committee are [Items 7 - 26](#).

**2. U. T. Tyler: Discussion and appropriate action regarding proposed revisions to the Mission Statement**

RECOMMENDATION

The Chancellor concurs in the recommendation of the Deputy Chancellor, the Executive Vice Chancellor for Academic Affairs, and the institutional president that proposed changes to the Mission Statement for U. T. Tyler as set forth on the following pages be approved by the U. T. System Board of Regents.

BACKGROUND INFORMATION

Each public institution of higher education is required to have a mission statement under *Texas Education Code* Section 51.359. Section 51.352 of the Code, regarding the Responsibility of Governing Boards, requires governing boards to "insist on clarity of focus and mission of each institution under its governance." Regents' *Rules and Regulations*, Rule 10402, states that the Academic Affairs Committee or the Health Affairs Committee, as appropriate, must review proposed changes to institutional mission statements.

Approval of this item will also help to ensure compliance with the Southern Association of Colleges and Schools (SACS) requirements regarding the periodic review and approval of each institution's mission statement by its governing board.

The U. T. Tyler Mission Statement was last approved on November 10, 2011.

### Current Mission Statement

The University of Texas at Tyler is a comprehensive institution of higher education offering undergraduate and graduate degree programs as an institution of the renowned University of Texas System. The University of Texas at Tyler's vision is to be nationally recognized for its high quality education in the professions and in the humanities, arts and sciences, and for its distinctive core curriculum. Guided by an outstanding and supportive faculty, its graduates will understand and appreciate human diversity and the global nature of the new millennium. They will think critically, act with honesty and integrity, and demonstrate proficiency in leadership, communication skills, and the use of technology.

The University is committed to providing a setting for free inquiry and expects excellence in the teaching, research, artistic performances and professional public service provided by its faculty, staff, and students. As a community of scholars, the University develops the individual's critical thinking skills, appreciation of the arts, humanities and sciences, international understanding for participation in the global society, professional knowledge and skills to enhance economic productivity, and commitment to lifelong learning.

Within an environment of academic freedom, students learn from faculty scholars who have nationally recognized expertise in the arts and sciences, and in such professions as engineering, public administration, education, business, health sciences, and technology. The faculty engages in research and creative activity, both to develop and maintain their own scholarly expertise and to extend human knowledge. The results of that research and other creative efforts are made available to students in the classroom and to the general public through publication, commercialization, and public service activities. The institution also seeks to serve individuals who desire to enhance their professional development, broaden their perspectives, or enrich their lives.

### Proposed Mission Statement

U. T. Tyler is committed to student success by providing a uniquely balanced student experience in an environment of innovative teaching and research shaped to serve and advance the educational, economic, technological, and public interests of East Texas and beyond.

3. **U. T. Rio Grande Valley: Approval of preliminary authority for a Doctor of Pharmacy degree program**

**RECOMMENDATION**

The Chancellor concurs in the recommendation of the Deputy Chancellor, the Executive Vice Chancellor for Academic Affairs, and the institutional president that the U. T. System Board of Regents approve

- a. preliminary authority for U. T. Rio Grande Valley to create a Doctor of Pharmacy degree program; and
- b. notification of the proposal to the Texas Higher Education Coordinating Board.

**BACKGROUND INFORMATION**

U. T. Rio Grande Valley requests preliminary authority to offer a Doctor of Pharmacy (PharmD) and to amass the resources needed for the program. The proposed PharmD at U. T. Rio Grande Valley would prepare students for state licensure and entry into the profession as licensed pharmacists. The institution anticipates enrollment of a cohort of 40 new students per year at full maturity of the program. The program will seek accreditation by the Accreditation Council for Pharmacy Education, the nationally recognized accrediting agency. A cooperative program is currently housed in the College of Health Affairs.

In 2001, U. T. Pan American established a cooperative program with the U. T. Austin College of Pharmacy. For 16 years, the cooperative has provided for up to 13 students per year to secure interviews at U. T. Austin's College of Pharmacy. The program allows these students the opportunity to complete the pre-pharmacy program and part of the pharmacy curriculum at U. T. Rio Grande Valley. Since the cooperative program was established, there have been 105 graduates, with more than 80 graduates continuing to practice in the Rio Grande Valley.

Once preliminary authority has been approved, U. T. Rio Grande Valley will submit the full degree program proposal for approval by the Board of Regents and the Texas Higher Education Coordinating Board.

**4. U. T. Tyler: Approval to establish a Bachelor of Science degree program in Chemical Engineering**

RECOMMENDATION

The Chancellor concurs in the recommendation of the Deputy Chancellor, the Executive Vice Chancellor for Academic Affairs, and the institutional president that authorization, pursuant to the Regents' *Rules and Regulations*, Rule 40307, related to academic program approval standards, be granted to

- a. establish a Bachelor of Science degree program in Chemical Engineering at U. T. Tyler; and
- b. submit the proposal to the Texas Higher Education Coordinating Board for review and appropriate action.

BACKGROUND INFORMATION

Program Description

The four focus areas in U. T. Tyler's proposed Chemical Engineering Program are in: (a) energy, including petroleum and natural gas production and processing; (b) biochemical engineering manufacturing and production processes; (c) environmental contamination and remediation; and (d) materials manufacturing and process design. Chemical engineers have a strong foundation in chemistry, physics, mathematics, and basic engineering. Chemical engineering courses include thermodynamics, transport phenomena, mass transfer operations, materials engineering, process dynamics and control, kinetics, and plant design. Many of these courses or subjects are already being taught in the other engineering disciplines presently at U. T. Tyler. The degree program will be 128 semester credit hours including 42 hours of general core, 80 hours of required courses, and 6 hours of technical electives. The program will include 15 hours of advanced Mathematics, 20 hours of chemistry, 8 hours of university (or calculus-based) physics, 15 hours of general engineering, and 36 hours of chemical engineering.

Need and Student Demand

The demand for chemical engineers in emerging areas such as nanotechnology, alternative energy, biotechnology, and sustainability will increase substantially in the coming decade. Texas has the highest demand for and employment of chemical engineers in the country. Additionally, a substantial portion of the workforce in chemical engineering and related fields is at the age of 55 or older and will be nearing retirement within the next 10 years.

The U.S. Bureau of Labor Statistics (BLS) estimates that chemical engineering jobs will experience an 8% growth from 2016 to 2026, with many industry officials predicting significantly stronger growth. The growth prospects for chemical industries in Texas remains strong of \$166 billion in capital investment made in U.S. projects in 2016, almost one third came from Texas, with 40% of that figure accounted for in chemical manufacturing facilities. Salaries for chemical engineers rank near the top of all engineering professions, with a 2016 mean salary of \$98,340. Furthermore, Texas has the highest employment level of chemical engineers in the

United States. According to the BLS, of the top 10 metropolitan areas in the United States with the highest employment levels in chemical engineering (as of May 2016), three are located in Texas, including: (1) the Greater Houston area, (4) the Dallas-Plano-Irving area, and (7) the Beaumont-Port Arthur area. Three of the top 10 metropolitan areas with the highest concentration of jobs and location quotients are: (1) Lake Charles, Louisiana; (2) Beaumont-Port Arthur, Texas; and (6) Houston-The Woodlands-Sugar Land, Texas, which all border East Texas. In terms of general geographic areas, metropolitan or otherwise, amongst the top 10 is the Dallas-Plano-Irving area and also the Dallas-Fort Worth-Arlington area, which is considered separately. This is particularly noteworthy considering there is no chemical engineering program within a 175-mile radius of the Dallas-Fort Worth Metroplex. If the closely related fields of environmental and petroleum engineering are considered, Texas ranks fourth and first, respectively, in employment of engineers in these fields, with more than six times the number of petroleum engineering jobs than the second-ranked State of Oklahoma.

According to the BLS, nationwide, the related fields of biomedical engineering, environmental engineering, and petroleum engineering, which are expected to be amongst those engineering fields with the highest demand, have anticipated job market growths of 23.1%, 12.4%, and 9.8%, respectively, over the next 10 years. According to the Texas Workforce Commission Texas Labor Analysis, the job market for biomedical engineers, chemical engineers, and petroleum engineers will grow in Texas by 37.1%, 18.4%, and 25.6%, respectively, over the same period.

Chemical Engineering enrollment in the State of Texas has been steadily increasing in recent years. Based on enrollments reported to the Texas Higher Education Coordinating Board (THECB), the total number of undergraduate chemical engineering majors increased by 27% from Fall 2012 to Fall 2016, and the number of degrees awarded increased by 23% from Academic Year 2013 (i.e., 2012-2013) to the most recently completed Academic Year (i.e., 2016-2017).

Presently, there are nine undergraduate chemical engineering programs at public institutions in the State of Texas and one program at Rice University. The most recently launched program is at U. T. San Antonio, which began in Fall 2017 and has yet to have graduates. The most recently approved program is at U. T. Permian Basin, which will begin in Fall 2018. The fall enrollment numbers for the seven other public university programs, located at Lamar University, Prairie View A&M University, Texas A&M University-Kingsville, Texas A&M University, Texas Tech University, U. T. Austin, and the University of Houston, are illustrated in Table 1. Fall 2012 to Fall 2016 are the most recent fall semesters available through the THECB Profiles Reports Electronically Produced website. From Fall 2012 to Fall 2016, the total enrollment increased 27% statewide and the degrees awarded during the respective academic years increased by 23%.

**Table 1: THECB declared chemical engineering majors from Fall 2011 to Fall 2015.**

<b>Institution</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
LAMAR UNIVERSITY	243	344	386	453	417
PRAIRIE VIEW A&M UNIVERSITY	222	260	301	319	307
TEXAS A&M UNIV-KINGSVILLE	135	157	174	218	235
TEXAS A&M UNIVERSITY	644	710	519	601	709
TEXAS TECH UNIVERSITY	258	211	218	257	281
U. T. AUSTIN	702	704	738	742	759
UNIVERSITY OF HOUSTON	411	423	488	587	620
<b>TOTALS</b>	<b>2,615</b>	<b>2,809</b>	<b>2,824</b>	<b>3,177</b>	<b>3328</b>

The table below projects enrollment as full-time student equivalent (FTSE) over the first five years of the proposed Chemical Engineering program and is based on the enrollment trends experienced by U. T. Tyler's Civil Engineering Program, which was established in 2006.

<b>YEAR</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Headcount/FTSE</b>	22	43	67	98	120
<b>Attrition</b>	4	6	8	10	12
<b>Graduates</b>	0	10	11	15	20

#### Program Quality

Four new faculty members with doctoral degrees in chemical engineering or closely related areas will be hired, including a department chair, an associate professor, and two assistant professors. Existing faculty members in chemistry, civil engineering, and mechanical engineering will serve as support faculty teaching related courses. These existing faculty members have advanced degrees in chemical engineering or closely related areas, including chemistry, civil engineering (with an environmental engineering focus), and mechanical engineering (with a focus in thermodynamic and fluid mechanic systems). They include three professors in the Department of Chemistry, two in the Department of Mechanical Engineering, and two in the Department of Civil Engineering (or seven total existing faculty).



Revenue and Expenses

The table below includes the projected enrollments and expenditures for the first five years.

<b>Projected Enrollment</b>	<b>5-Year Total</b>
Number of Students Used for Formula Funding Calculation	285
Total Number of Students	350
<b>Expenses</b>	<b>5-Year Total</b>
<i>Faculty</i>	
Salaries	\$1,677,846
Benefits	\$420,337
<i>Graduate Students</i>	
TA Salaries	\$0
TA Benefits	\$0
GRA Salaries	\$0
GRA Benefits	\$0
<i>Staff &amp; Administration</i>	
Graduate Coordinator Salary	\$0
Administrative Staff Salaries	\$144,256
Staff Benefits	\$36,064
SCC Operating Benefits	\$0
<i>Other Expenses</i>	
M&O	\$77,000
Travel	\$14,000
Laboratory Start-up	\$1,698,000
Laboratory Consumables	\$35,000
<b>Total Expenses</b>	<b>\$4,102,503</b>
<b>Revenue</b>	<b>5-Year Total</b>
<i>From Student Enrollment</i>	
Formula Funding	\$1,000,229
Tuition and Fees	\$1,974,924
<i>From Institutional Funds</i>	
Reallocated Operating Expenses	\$632,350
<i>From Grant Funds</i>	
	\$0
<i>From Other Revenue Sources</i>	
Donor Funds Directed to Capital	\$500,000
<b>Total Revenue</b>	<b>\$4,107,503</b>

Coordinating Board Criteria

The proposed program meets all applicable Coordinating Board criteria for new Bachelor of Science degree programs.