Academic Planning and Initiatives in the Provost’s Office

New Academic Administrators Workshop

Gregory L. Fenves
August 18, 2014
1. Curriculum and Teaching Innovations
2. Campus Conversation
3. Student Success Initiatives
4. Graduate Education Quality Measures
5. Strategic Research Programs
6. Aligning Goals with Budget
7. Update on Dell Medical School
8. Questions and Discussion
Curriculum and Teaching Innovations

• Energizing faculty to reimagine curriculum through new innovation grants: Faculty Fellows Program, MOOCs, CIGs—more than 75 faculty have received Provost Office funding in the last three years.

• Changes in Peer Observation and Evaluation of teaching (UT System guidelines under review).

• Development of centralized technology/analytics/marketing platform for delivery of technology enhanced education.

• Campus Conversations in Fall 2014 to construct the framework for a 21st century campus built on technology innovations, experiential learning and a redefinition of what it means to earn a UT Austin degree.
Curriculum Innovation Grants are awarded to faculty to support projects and innovations that both enhance the quality of student learning experiences and develop local expertise in priority areas within colleges and departments across the University. The next call for proposals will be announced in September 2014. We will be providing further information as this date approaches. For questions about this initiative contact ctl-grants@austin.utexas.edu.

2014 Curriculum Innovation Grantees
Back to schools and partners

The University of Texas at Austin is the top-ranked public university in a nearly 1,000-mile radius, and is ranked in the top 25 universities in the world. Students have been finding their passion in life at UT Austin for more than 130 years, and it has been a member of the prestigious AAU since 1939. UT Austin combines the academic depth and breadth of a world research institute (regularly ranking within the top three producers of doctoral degrees in the country) with the fun and excitement of a big-time collegiate experience. It is currently the fifth-largest university in America, with more than 50,000 students and 3,000 professors across 17 colleges and schools. UT Austin will be opening the Dell Medical School in 2015.

Courses: Showing 1 - 9 of 9  all  current  new  past

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
<th>Start Date</th>
<th>Instructor(s)</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>UT.3.02x</td>
<td>Age of Globalization</td>
<td>Identify the historical and cultural systems driving globalization and changing societies around the world.</td>
<td>27 Aug 2014</td>
<td>John Hoberman</td>
<td>UTAustinX</td>
</tr>
<tr>
<td>UT.2.02x</td>
<td>Ideas of the Twentieth Century</td>
<td>Learn how philosophy, art, literature, and history shaped the last century and the world today.</td>
<td>27 Aug 2014</td>
<td>Daniel Bonevac</td>
<td>UTAustinX</td>
</tr>
<tr>
<td>UT.7.01x</td>
<td>Foundations of Data Analysis</td>
<td>This is a hands-on course with a data lab to teach fundamental statistical topics such as descriptive statistics, inferential testing, and modeling.</td>
<td>4 Nov 2014</td>
<td>Michael J. Mahemeta</td>
<td>UTAustinX</td>
</tr>
<tr>
<td>UT.5.01x</td>
<td>Effective Thinking Through Mathematics</td>
<td>Learn tools of effective thinking through puzzles and the world of mathematics around you in this fun and fascinating course.</td>
<td>18 Feb 2014</td>
<td>Michael Starbird</td>
<td>UTAustinX</td>
</tr>
<tr>
<td>UT.5.01x</td>
<td>Linear Algebra - Foundations to Frontiers</td>
<td>Learn the theory of linear algebra hand-in-hand with the practice of software library development.</td>
<td>29 Jan 2014</td>
<td>Myers van de Geijn</td>
<td>UTAustinX</td>
</tr>
</tbody>
</table>
Campus Conversation – Transformation of Undergraduate Education at UT
Undergraduate education is inextricably linked to graduate education and research.
“From Master Plan to No Plan: The Slow Death of Public Higher Education”
School of Undergraduate Studies

Raising Our Graduation Rates

Course Transformation

UTx and SMOC

Freshmen Research Initiative

Projects for Under-Served Communities

Be Global, internships

OnRamps
Challenges for Research Universities

- Universities are under pressure to justify the value of education.
- Research universities are criticized about the balance of education and research.
- Flagship public research universities must lead the integration of high-value education with high-quality research.
Changes in the Educational Model

- Students are increasingly transferring credits, often over which UT has no control.
- The credit hour and degree are becoming unbundled based on assessing competency.
- Competency-based education will lead to more for-profits colleges competing on price.
Example: Student transfer credits to UT

- 64% of students were enrolled at another institution. Mean for AAU flagship publics is 42%.
- 80,000 classes transferred per year.
- 20% classes from Austin Community College.
- 25 courses account for 50% of the classes transferred.
Increase the “value proposition” of residential undergraduate education at a top-ranked public research university
<table>
<thead>
<tr>
<th>KNOWLEDGE</th>
<th>DELIVERY</th>
<th>PATHWAYS</th>
<th>EXPERIENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2500+ faculty</td>
<td>3-hour lectures, seminars, labs</td>
<td>~40 courses per 100+ majors, flags, certificates, bridges, etc.</td>
<td>UG research, honors, internships, student orgs, service, international, athletics, etc.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Are there better ways to include research?</td>
<td>• How is the mix of delivery decided?</td>
<td>• What criteria should faculty use in defining pathways?</td>
<td>• How can research mission be integrated better?</td>
</tr>
<tr>
<td>• Can graduate students be involved more effectively?</td>
<td>• How can technology assist faculty improve student learning outcomes?</td>
<td>• Are they overly complex, and could they be simplified?</td>
<td>• What is the role of experiential learning?</td>
</tr>
<tr>
<td>• How do we teach UG to be knowledge creators?</td>
<td>• What are the advantages of scale?</td>
<td>• Do we respond to unbundling courses and degrees? How?</td>
<td>• Are there non-curricular activities that add important competencies?</td>
</tr>
</tbody>
</table>
• Employers value problem-solving, ability to analyze using evidence, project-based learning, internships and service, collaborative research.

• These experiences coupled with liberal education prepare graduates to be leaders.

• UT has many opportunities for developing new ways to educate students for leadership.

• Transformation of UG education integrates with UT’s research and graduate education missions.
Campus Conversation Symposium
September 5, 2015, SAC, 8 am – 6 pm

- Kickoff by Powers, Fenves, Prof. Jeremi Suri (task group chair)
- Keynotes/discussion:
  - Prof. Rebecca Richards-Kortum (Rice)
  - Prof. William Hitchcock (UVA)
- Breakout session #1: How do you envision the connection between your research and your teaching?
- Breakout Session #2: What can UT do to facilitate improvements in the educational experience on campus?
Student Success Initiatives
Who Gets to Graduate?

By PAUL TOUGH  MAY 15, 2014

For as long as she could remember, Vanessa Brewer had her mind set on going to college. The image of herself as a college student appealed to her — independent, intelligent, a young woman full of potential — but it was more than that; it was a chance to rewrite the ending to a family story that went off track 18 years earlier, when Vanessa’s mother, then a high-achieving high-school senior in a small town in Arkansas, became pregnant with Vanessa.

Vanessa’s mom did better than most teenage mothers. She married her high-school boyfriend, and when Vanessa was 9, they moved to Mesquite, a working-class suburb of Dallas, where she worked for a mortgage company. Vanessa’s parents divorced when she was 12, and money was always tight, but they raised her and her younger brother to believe they could accomplish anything. Like her mother, Vanessa knew...
Student Success Initiatives

Improved Persistence - Highest ever at UT

- First Semester: Fall 2014 cohort achieved 98.8%
- Freshman Year: Fall 2013 cohort achieved 93.5%
- Third semester: Fall 2013 cohort achieved 93.6%
### Student Success Initiatives

**Admitted Student Analysis - Predicted 4 Year Grad Rate**

<table>
<thead>
<tr>
<th>4 Year Grad Rate</th>
<th>2013 FTIC</th>
<th>2014 FTIC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td># Students</td>
<td>Avg SAT</td>
</tr>
<tr>
<td>&lt; 45%</td>
<td>3463</td>
<td>1151</td>
</tr>
<tr>
<td>&gt;= 45%</td>
<td>11292</td>
<td>1340</td>
</tr>
</tbody>
</table>

- Avg SAT scores increased 43 points for group < 45% 4 YR GR
- Avg SAT scores increased 18 points for students >= 45% 4 YR GR
Student Success Initiatives

Time-to-Graduation Metrics

- Prioritizes registration slotting based on degree hours completed
- Creating “senior” status for students planning to graduate in next year to insure priority for courses and advising
Student Success Initiatives

New Incentive Based Scholarships

• Summer Bridge provides $6,000 to 250 incoming freshmen for completion of 6 hours during summer

• University Leadership Network provides $20,000 over 4 years for 500 students who receive leadership training and experiential program opportunities.

• Academic Excellence Awards for students maintaining 3.0 GPA and completing 30 hours in freshman year

• $2.2M in Recruitment funding for Honors Programs
Student Success Initiatives

Building Community

• 360 Connections places every freshmen student in a twenty-student small community to help adjust to life at UT

• Expansion of Success Programs to include every student under 45% predicted 4 year graduation rate

• Creation of “Class of” branding to encourage 4 year graduation
Graduate Education Quality Measures
• Between **11,000** and **13,000** graduate students enrolled in any given year.

• Approximately **29,000** graduate school applications processed each year.

• Over **100** graduate programs.

• Approximately **3,000** master’s degrees conferred each year.

• Approximately **800** doctoral degrees conferred each year.
Implementing Quality Measures

- Milestones
- Program Reviews
- Graduate Student Information System (not part of today’s discussion)

GOAL
Reduce time-to-degree
Right size graduate programs
Milestones

- Electronic via web portal.
- Degree/milestone plans developed for over 100 programs and all “tracks” within programs (most have at least four).
**Milestones**

**Timeline Illustration for PhD students in Psychology: Cognitive Neuroscience (Program)**

**Degree Plan ID** PSY990CND20152

<table>
<thead>
<tr>
<th>UT Austin Milestones</th>
<th>Expected Time of Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review degree requirements and milestones agreement form with adviser</td>
<td>End of first semester.</td>
</tr>
<tr>
<td>Successful completion of all exams (oral and/or written) needed to advance to candidacy</td>
<td>End of third year.</td>
</tr>
<tr>
<td>Complete all required, formal coursework</td>
<td>End of third year.</td>
</tr>
<tr>
<td>Advancement to candidacy</td>
<td>End of fourth year.</td>
</tr>
<tr>
<td>IRB (human testing) approvals (if needed)</td>
<td>End of first year.</td>
</tr>
<tr>
<td>IACUC (animal testing) approvals (if needed)</td>
<td>End of first year.</td>
</tr>
<tr>
<td>Dissertation/treatise (or equivalent) completed, successfully defended, and approved by committee</td>
<td>End of fifth year</td>
</tr>
<tr>
<td>Student completes and files all paperwork required for graduation</td>
<td>End of fifth year</td>
</tr>
<tr>
<td>Dissertation/treatise (or equivalent) accepted by Graduate School</td>
<td>End of fifth year</td>
</tr>
<tr>
<td>Exit Interview completed and submitted to Survey of Earned Doctorates</td>
<td>End of fifth year</td>
</tr>
<tr>
<td>Other program specific requirements Describe: <strong>First-year Evaluation</strong></td>
<td>End of first year.</td>
</tr>
<tr>
<td>Other program specific requirements Describe:</td>
<td></td>
</tr>
</tbody>
</table>

Form completed by: Kimberly Terry Date: 7/11/13
External Program Reviews

+ Many Other AAU Schools
Program Review Comments

MOST COMMON POSITIVE COMMENT

“We are impressed. Program is in top 10 in the country.”

MOST COMMON NEGATIVE COMMENT

“Your support for graduate students is not competitive. You must correct this.”
Strategic Research Programs
Trends in Research Expenditures at UT Austin

**Funding by Source**
- **Federal**: 60%
- **Business**: 11%
- **Non Profit**: 5%
- **State**: 4%
- **Institutional**: 19%
- **Other**: 1%

**Total R&D Expenditures**
- 2006: $477MM
- 2007: $503MM
- 2008: $553MM
- 2009: $566MM
- 2010: $590MM
- 2011: $632MM
- 2012: $622MM
- 2013: $634MM

**Business Financed**
- 2006: $33MM
- 2007: $36MM
- 2008: $43MM
- 2009: $49MM
- 2010: $56MM
- 2011: $68MM
- 2012: $68MM
- 2013: $71MM

**Federally Financed**
- 2006: $295MM
- 2007: $314MM
- 2008: $352MM
- 2009: $336MM
- 2010: $350MM
- 2011: $355MM
- 2012: $355MM
- 2013: $373MM
National Rankings by Non-Medical R&D Expenditures

Expenditures at top 20 institutions, ranked by all non-medical school R&D expenditures: FY 2011
(Dollars in thousands)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Institution</th>
<th>All non-medical school R&amp;D expenditures</th>
<th>All medical school R&amp;D expenditures</th>
<th>All R&amp;D expenditures</th>
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<tbody>
<tr>
<td>1</td>
<td>Johns Hopkins U. a</td>
<td>1,498,845</td>
<td>646,463</td>
<td>2,145,308</td>
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<tr>
<td>2</td>
<td>U. WI, Madison</td>
<td>766,796</td>
<td>344,846</td>
<td>1,111,642</td>
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<tr>
<td>3</td>
<td>U. MI, Ann Arbor</td>
<td>734,294</td>
<td>544,829</td>
<td>1,279,123</td>
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<tr>
<td>4</td>
<td>MA Institute of Technology</td>
<td>723,610</td>
<td>0</td>
<td>723,610</td>
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<tr>
<td>5</td>
<td>U. CA, Berkeley</td>
<td>707,945</td>
<td>0</td>
<td>707,945</td>
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<tr>
<td>6</td>
<td>TX A&amp;M U., College Station</td>
<td>705,720</td>
<td>0</td>
<td>705,720</td>
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<tr>
<td>7</td>
<td>PA State U.</td>
<td>698,031</td>
<td>96,815</td>
<td>794,846</td>
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<tr>
<td>8</td>
<td>M. D. Anderson Cancer Ctr.</td>
<td>663,279</td>
<td>0</td>
<td>663,279</td>
</tr>
<tr>
<td>9</td>
<td>GA Institute of Technology</td>
<td>655,375</td>
<td>0</td>
<td>655,375</td>
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<tr>
<td>10</td>
<td>U. TX, Austin</td>
<td>632,171</td>
<td>0</td>
<td>632,171</td>
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<tr>
<td>11</td>
<td>U. MN, Twin Cities</td>
<td>586,191</td>
<td>261,228</td>
<td>847,419</td>
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<tr>
<td>12</td>
<td>Purdue U., West Lafayette</td>
<td>578,231</td>
<td>0</td>
<td>578,231</td>
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<tr>
<td>13</td>
<td>U. CA, Davis</td>
<td>546,878</td>
<td>161,018</td>
<td>707,896</td>
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<tr>
<td>14</td>
<td>U. IL, Urbana-Champaign</td>
<td>545,669</td>
<td>0</td>
<td>545,669</td>
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<tr>
<td>15</td>
<td>U. WA, Seattle</td>
<td>545,391</td>
<td>603,142</td>
<td>1,148,533</td>
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<td>16</td>
<td>U. CA, Los Angeles</td>
<td>542,640</td>
<td>439,717</td>
<td>982,357</td>
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<tr>
<td>17</td>
<td>U. CA, San Diego</td>
<td>542,407</td>
<td>466,971</td>
<td>1,009,378</td>
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<tr>
<td>18</td>
<td>Cornell U.</td>
<td>511,194</td>
<td>270,457</td>
<td>781,651</td>
</tr>
<tr>
<td>19</td>
<td>U. MD, College Park</td>
<td>495,382</td>
<td>0</td>
<td>495,382</td>
</tr>
<tr>
<td>20</td>
<td>OH State U.</td>
<td>492,914</td>
<td>339,212</td>
<td>832,126</td>
</tr>
</tbody>
</table>
Selected Research Programs (Sponsored)

- The Energy – Water Nexus
  - Leverage our core expertise in energy and water to address central issue for Texas and most of the world

- Advanced Manufacturing
  - Regain leadership in intelligent manufacturing (“3D Printing” was invented here!)
  - UT Austin is academic lead in Texas for the DMDI initiative

- Biomedical and Health Care Systems
  - Bring strengths in the sciences, engineering, computer science, operations research, business systems, and public health to integrate with clinical research in Dell Medical School

- NeuroX
  - Build on neurosciences at UT with the Dell Medical School and prepare for federal BRAIN initiative (http://www.whitehouse.gov/share/brain-initiative)
  - UT System funding for seeding new, major programs with federal funding

- Modeling and Simulation
  - Leverage our world-class faculty in applied math and computational science & engineering to lead in and build the “third pillar” of research inquiry.

- Advanced Computing
  - Sustain leadership position in all areas of advanced computing (HPC, big data analysis, cloud computing and visualization)
Aligning Goals with Budget
Academic Priorities

• Enhance excellence of faculty
  – Determine “right size” and competitive salaries
  – Recruitment, Promotion and Tenure, Post Tenure Review
  – Support for faculty in teaching and research
  – Improve support for interdisciplinary programs

• Undergraduate education
  – Campus conversation to develop roadmap
  – Center for Teaching and Learning (CTL) support for innovation and Provost Fellows
  – CTL/CIE (Continuing and Innovative Education) merger to scale technology and extend impact of instructional programs

• Graduate education
  – Competitive fellowships and stipends
  – “Right size” graduate programs based on PhD demand and program needs
  – Improve placement of PhDs in peer universities
  – Develop strategy for masters education (non-professional)

• Dell Medical School
  – Interdisciplinary initiatives in health care and biomedicine
  – Joint faculty appointments
  – Centers/Institutes linking current colleges/schools and units (CSU) with DMS and other health organizations
Faculty Salaries, 2002 – 2012

Comparison of UT full professor salaries with 17 flagship public universities show declining competitiveness in recent years in most departments.
DPAC Approach

• **Planning assumptions**
  – No new revenue
  – Budget 2% merit salary pool for faculty and staff each year
  – Balance recurring budget by 2016-17

• **Planning framework discussed with Deans**
  – “Right size” Tenured/Tenure-Track (T/TT) faculty for graduate education and research/scholarship priorities that fit within the budget
  – Provide competitive salaries for “right-sized” T/TT faculty
  – Budget faculty recruitment, including start-up as recurring expenses
  – Based on production model, determine non-tenure track (NT) faculty needed to complete teaching mission. Determine market salaries for core NT faculty.
  – Capture efficiencies in instructional budget
  – Continue operational efficiencies
  – Strategically use balances for priorities
  – Does not include enrollment growth
University Long-Term Budget Issues

- Recurring revenue generation of ~$40M new revenue per year for escalation
- Long-term tuition planning
- Administrative cost reduction
- Strategic planning and capital budgeting
- RCM (Responsibility Centered Management)-like approach is needed for the Instructional Budget
- Increasing funding for graduate student support

“The call for effectiveness in the use of resources will be perceived by many inside the university world as the best current definition of evil.” Clark Kerr (1995)
Update on Dell Medical School
Vision

**Transform** current and future medicine and the **healthcare delivery system** through **discovery, innovation, application, and translation**.

**Educate and inspire the next generation of physician leaders** by providing the foundation for our students to become skillful, ethical, and compassionate physicians; inquisitive scientists who are committed to the scholarship of discovery; and dynamic and successful medical educators.

Prepare clinicians to provide **person-centered, high-quality, safe and cost-effective care** that leads to optimal outcomes for the communities we serve.

**Advance boundaries of medicine** by being a vanguard of research and by creating an environment of scholarship, intellectual curiosity and exchange.

**Foster interprofessional team development** to enhance patient safety and improve healthcare outcomes.
Key Milestones

February 6, 2014
Board of Regent DD Approval of Three Buildings (572K GSF)

March 1, 2014
Appointment of Inaugural Dean S. Claiborne Johnston, MD, PhD
Milestones in Q2-Q3

- Submitted accreditation documents to LCME
- Recruiting department chairs in internal medicine, pediatrics, surgery, Ob/Gyn, neurology
- Complete affiliation agreement with Seton
- Executed agreement with Central Health
What will be unique in M.D. education?

• Innovative educational program:
  – Guided, self-directed learning
  – New technologies
  – Inter-professional education
  – Learning how to improve health care delivery
  – Research and dual degrees

• Opportunities for research and dual degrees:
  – Life Sciences
  – Engineering & Computer Science
  – Public Policy & Public Health
  – Business
Research Programs Under Discussion

- Oncology
- Infectious Disease
- Bioinformatics
- Birth Defects
- Engineering and Healthcare
- Clinical Neurosciences
- Computational Biomedicine
Questions and Discussion

The College Administrator’s Survival Guide

C.K. Gunsalus