College of Engineering:
Faculty and Staff Forum
1. New Hires
2. Undergraduate mentoring
3. Graduate student mentor
4. New building
1. New Hires
2. Undergraduate mentoring
3. Graduate student mentor
4. New building
UTSA College of Engineering
Growth – New Faculty 2016

BME
• polymer/drug delivery systems – negotiating
• department chair – continuing/re-advertise

ECE
• power engineering – Ethan Ahn (nano-electronics)
• electronic device materials – Sara Ahmed (energy efficiency, e-cars)

CEE
• environmental engineering – Vikram Kapoor (Microbial fuel cell)

ME
• corrosion engineering – Brendy Rincon (coatings)
• bio-mechanics – Wei Gao (bioinspired materials)
• medical device design – Lyle Hood (microneedle for brain and bladder cancer)

+ considering 2 direct hires
+ So far – received 3 STARS funding awards
1. New Hires

2. Undergraduate mentoring

3. Graduate student mentor

4. New building
Why Faculty mentoring of undergraduates

• Largest drop-outs as Freshmen and Sophomores, AND COE retention higher as JR/SR than other colleges

• Build affinity with UTSA COE, faculty, peers

• Find struggling and highly-successful students

• Help students understand curriculum and secrets to success
Why Undergraduate Mentors?

- UT System/Pres. Romo/ Provost Agrawal mandate:
  - Increase retention
  - Shorten time to graduation
  - Increase graduate student population
  - Increase research expenditures
Why Undergraduate Mentors?

• UT System/Pres. Romo/ Provost Agrawal mandate:
  – Increase retention
  – Shorten time to graduation
  – Increase graduate student population
  – Increase research expenditures
COE Undergraduate Mentors

• Faculty Training and Support
• All undergraduate students in each department will be assigned to a faculty “mentor” for duration at UTSA
• Student Forums continue
• Faculty request 20 min. appointments
• Keep log of students that show
• Undergrads mentored on Annual Evaluations
COE Undergraduate Mentors

• Topics to discuss at these ~20 min meetings:
  – Current/previous class load and performance
  – Attendance in class
  – Study habits
  – Course degree plans – filled out their Freshman year and reviewed each time
  – Internships
  – REU
  – Graduate school/employment
  – International experiences
  – Student organizations
Other Retention Actions

• Implementation of Faculty Mentoring of Undergraduates

• Course Re-Design and Intervention for Struggling Students

• Graduate Student Mentorship and Progress Towards Degree

• Launch of College of Engineering Student Success Center
UTSA College of Engineering
Ensuring Student Success
UTSA College of Engineering
Ensuring Student Success

Mission of the Student Success Center is:
Enhance and enrich the university experience for students in the College of Engineering by providing them access to internships and co-ops within the industry, international and study abroad experiences, community outreach opportunities and leadership and interpersonal skills training – while supporting academic success.
1. New Hires

2. Undergraduate mentoring

3. Graduate student mentor

4. New building
• **Motivation: Retain more Graduate Students**
  – PhD students entering 2010-2011, only 30% obtained degrees after 5 years
  – Masters entering 2012-2013, only 42% graduated 2 years
  – Even considering ~20% part-time students, these numbers are low.

• **Advising: Build affinity with UTSA; begin research**
  – all new graduate students have individual faculty advisor by first semester, submit program of study
  – GAR will coordinate recruitment activities.

• **Curriculum:** Map required courses within each area of specialty at proper teaching intervals and with qualified faculty, programs of study designed within the first year for graduate students linked to actual courses
  – All programs should have an annual student evaluation and milestone agreement (for PhD students) to assess degree progress, as required by the UT System.

• **Support:** “PhD funding not in perpetuity”
  – New PhD funding model: 1. Research Projects; 2. Release current GRA’s to GTA’s + supplement to support new GRA; 3. Offer GTA + supplement
  – $1M to GTA funding, cover all department requests
  – Now Provost covering Start-up GRA’s (300k this year in addition to regular $1M)
1. New Hires
2. Undergraduate mentoring
3. Graduate student mentor
4. New building
UTSA College of Engineering

Growth

Bachelors of Science in

Chemical Engineering

has been recommended for approval by coordinating board. Formal signing in June or July.
UTSA College of Engineering

Growth
New Building: Near Final Program

- Maker Space ~17,500 nsf
- Instrumentation and Control Instructional lab
  - ~1,600 nsf
- Fluid and Thermofluid Instructional lab
  - ~1,600 nsf
- Materials Characterization Instructional lab
  - ~1,600 nsf
- Chemical Engineering ~ 10,000 nsf
- High Bay large-scale testing facility
  - ~ 6,500 nsf + 4,500 nsf basement
Questions?
Thank you!