Internal Evaluation Report 2009
UTeachEngineering
Funded by the National Science Foundation
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Contents

Current Work Plan

Landscape of Engineering Courses across Texas

Significant effort will be focused on defining the landscape of engineering courses across Texas.

- This will begin with an inventory of courses currently offered that have titles related to engineering. Descriptions will include the following:
  - What engineering related courses are being offered in Texas? How many courses are being offered by which districts and which campuses?
  - Information about the teachers of these courses
  - Information about the enrolled students

A preliminary report of the results of this inventory will be submitted to the *UTeachEngineering* Executive Board by December 15, 2009.

- Other questions based on input from the *UTeachEngineering* Executive Board will be added to enable an accurate description of the Texas Engineering "landscape."

- Next, various statistical analyses of the inventory data will be performed to answer specific questions that will allow for the development of the "landscape". These questions will be developed through iterative information exchange between the Internal Evaluator and the *UTeachEngineering* Executive Board.

Survey District Plans for Offering Engineering Courses across Texas

Develop a stratified random sample of districts to investigate district plans for offering Engineering courses. A report on the stratified random sample will be submitted to the *UTeachEngineering* Executive Board by December 15, 2009.

Examine High School Students

Data will be gathered on students of teachers participating in the *UTeachEngineering* Program (AISD only – when data is available), including the following:

- Demographics
- Track engineering courses over time
- Examine TAKS (TSI), SAT/ACT, AP/IB
- Type of high school curriculum program (degree) (RHSP or DAP)
- Type of post-secondary (2-year, 4-year, Barron's Selectivity rating)
- Following into post-secondary
  - College going rates

In doing this work the internal evaluator will comply with the provisions of the data sharing agreement between the Austin ISD and *UTeachEngineering*.

Section 1: Landscape of Engineering Courses across Texas

This section will focus on defining the landscape of engineering courses across Texas. First, a background description of the Texas data will be presented, secondly, a description of the Engineering-Type courses and where they are taught, thirdly, a description of the teachers teaching Engineering-Type courses, and finally, a description of the students taking Engineering-Type courses.

The Texas Policy Landscape

Texas has been in the forefront of the school accountability movement. Indeed, much of the federal *No Child Left Behind Act of 2001* (No Child Left Behind [NCLB], 2002) was modeled on the Texas system of accountability. The current accountability system is one where campuses and districts must meet either an absolute standard or an improvement standard for each of four applicable accountability measures (Texas Education Agency, 2004a, p. 1). Each campus and district is assigned a rating based on these measures. Campuses and schools are rated as Exemplary, Recognized, Academically Acceptable, or Academically Unacceptable. The four measures include (a) passing rates on the Texas Assessment of Knowledge and Skills (TAKS) in reading/English language arts, writing, mathematics, social studies, and science for all, African American, Hispanic, White, and economically disadvantaged students; (b) passing rates on the State-Developed Alternative Assessment; (c) completion rates (Grades 9–12) for all, African American, Hispanic, White, and economically disadvantaged students; and (d) annual dropout rates in Grades 7–8 for all, African American, Hispanic, White, and economically disadvantaged students. These indicators are calculated as a percentage of those who met the standard using the student passing standard adopted by the State Board of Education.

The federal No Child Left Behind Act (2002) has intensified the accountability environment in Texas as it has in every other state. In part, the intensification comes with the controversial Adequate Yearly Progress (AYP) criteria. AYP are based on three measures: (a) reading/ELA, (b) mathematics, and

(c) either graduation rate for high schools and districts or attendance rate for elementary and middle/junior high schools.

The Texas policy environment is complex and data-driven. Although the state accountability system mandated by the Texas legislature and the AYP procedures mandated by the No Child Left Behind Act (2002) are aligned, they are not the same. Like the Texas system, the federal policy assigns annual ratings. The federal ratings are synthesized under the main heading of AYP. Public schools must achieve the required federal AYP or they are subjected to federal and state sanctions. Campuses, districts, or states receiving Title I, Part A funds that fail to meet AYP for 2 consecutive years are subject to requirements such as offering supplemental education services, offering school choice, or taking corrective actions to the ultimate threat of campus closure or reconstitution (TEA, 2004a; TEA, 2008).

Both the Texas and Federal systems depend on the collection of data. To assist is data analysis, the 79th Texas Legislature (2006) authorized the creation of three Education Research Centers (ERCs) located at higher education institutions in Texas. These ERCs are a first in being able to connect Texas public K-12 information to higher education and workforce information. The *UTeachEngineering* project has access to the ERC data for use in the evaluation of the project. The state collects a vast amount of information on individual students, districts, schools, universities, and workforce.

Data Availability

The state of Texas public school system currently has an enrollment of 4.6 million students. Mandated in 1984 by the Texas Legislature, the Public Education Information Management System (PEIMS) was created by the Texas Education Agency. The purpose of PEIMS is to collect data on student and staff demographic, student performance, staff information, facilities, funding, etc…. The Academic Excellence Indicator System (AEIS) is a database constructed from the information in PEIMS for reporting purposes.

The Texas Higher Education Coordinating Board (THECB) also contributes data to the ERC database. Available data include college enrollment, course enrollment, graduation rates, degrees conferred, and faculty characteristics and responsibilities. Additionally, data on the Texas Academic Skills Program (TASP) and the Texas Success Initiative (TSI) are also available. The SBEC data available through the ERCs includes information on the type and number of teachers certified, as well as teacher test scores on the state certification exams.

In addition to the currently available data, the ERCs will eventually expand its offerings to include data from the Texas Workforce Commission (TWC), the College Board, ACT, and the National Student Clearinghouse. The TWC data will allow researchers to track Texas public education graduates into the state's workforce. College Board data will add Advanced Placement, International Baccalaureate, PSAT, and SAT scores to the data warehouse. The ACT scores will also be added. Finally, including National Student Clearinghouse data into the ERC database will allow researchers to track the college performance of Texas public education graduates who leave the state in pursuing post-secondary education in other states.

Engineering-Type Courses

This section will document the Engineering-Type courses currently offered in Texas. Details will be presented on the number of courses and the districts offering these courses.

Listings of courses taught in Texas were examined by title and general description of possible course content. Selected courses were then categorized into eight clusters of Engineering-Type courses. The eight clusters were: Technology, General Engineering, Electrical Engineering, Architecture and Civil Engineering, Energy/Power, Robotics, Aerospace Engineering, and Biomedical Engineering.

The data collected on courses classifies classes with a *Grade-Level-Code*. All of the Engineering-Type courses on the list are classified as *Secondary*. Table 1 lists the Engineering-Type courses by category for the academic years 2007-08 and 2008-09 (TEA, 2008; TEA, 2009).

Table 1: Engineering-Type Courses Divided into Eight General Categories

	2007-08	2007-08	2008-09	2008-09
Engineering-Type Courses 2008-09	**Frequency**	**Percent**	**Frequency**	**Percent**
AEROSPACE ENGINEERING				
AEROSPACE ENGINEERING (AERO)	6	.5	7	.5
ARCHITECTURE AND CIVIL ENGINEERING				
ARCHITECTURAL CONSTRUCTION-AC	37	2.9	32	2.3
CIVIL ENGNRNG AND ARCHIT (CEA)	3	.2	19	1.4
BIOMEDICAL ENGINEERING				
INTRO TO BIOTECH (IBIOTECH)	6	.5	5	.4
ELECTRICAL ENGINEERING				
AUDIO ENGINEERING (AD)	1	.1	5	.4
DATA ACQUISITION AND ANALYSIS	1	.1	3	.2
DIGITAL ELECTRONICS (DE-TP)	13	1.0	15	1.1
ELECTRIC/ELECTRON TECH (EET)	29	2.3	27	2.0
ENG: THE DIGITAL FUTURE (ETDF)	21	1.7	24	1.7
ENERGY/POWER				
ENERGY/POWER/TRANSPORT SYSTEMS	24	1.9	23	1.7
GENERAL ENGINEERING				
ENGINEER & ARCHITECT DRAFTING	7	.6	5	.4
ENGINEERING DESIGN & DEV (EDD)	20	1.6	27	2.0
ENGINEERING GRAPHICS (EG)	161	12.8	164	11.9
ENGINEERING PRINCIPLES (EP)	54	4.3	61	4.4
INTRO ENG DESIGN (ED-TP)	38	3.0	43	3.1
INTRO TO ENGINEERING DES (IED)	60	4.8	79	5.7
PRINCIPLES OF ENGINEERING (POE)	50	4.0	71	5.2
ROBOTICS				
ROBOTICS I (ROBI)	9	.7	21	1.5
ROBOTICS II (ROBII)	3	.2	5	.4
TECHNOLOGY				
AGRICULTURAL STRUCTURES TECH	224	17.8	222	16.1
MANUFACTURING TECHNOLOGY (MT)	71	5.6	67	4.9
PRINCIPLES OF TECH I (PTI)	160	12.7	199	14.5
PRINCIPLES OF TECHNOLOGY II	8	.6	12	.9
TECHNOLOGY PROBLEMS/SOLUTIONS	70	5.6	62	4.5
Total	1076		1198	

Table 1 lists all the Engineering-Type courses taught in Texas. In the 2008-09 academic year, *Agricultural Structures Technology* (17.8%) was the most popular course taught. The second most popular course taught in the most recent academic year was *Principals of Technology I* (12.7%).

Figures 1 and 2 depict the proportion of the eight categories that comprise the course offerings each academic year.

Figure 1: Percentage of Courses in each of the Eight Categories for academic year 2007-08.

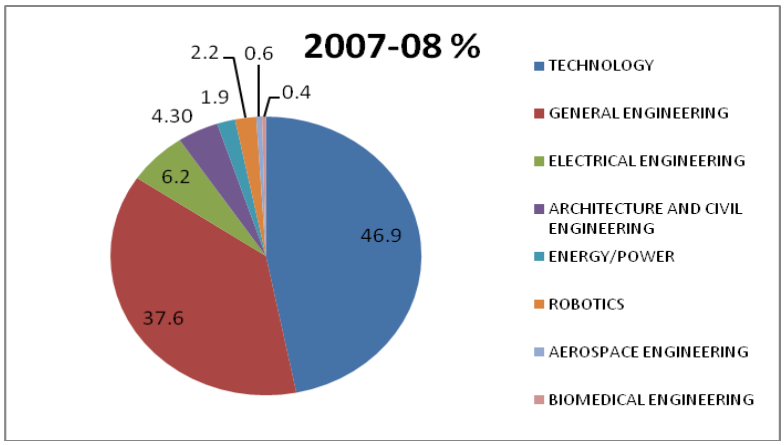
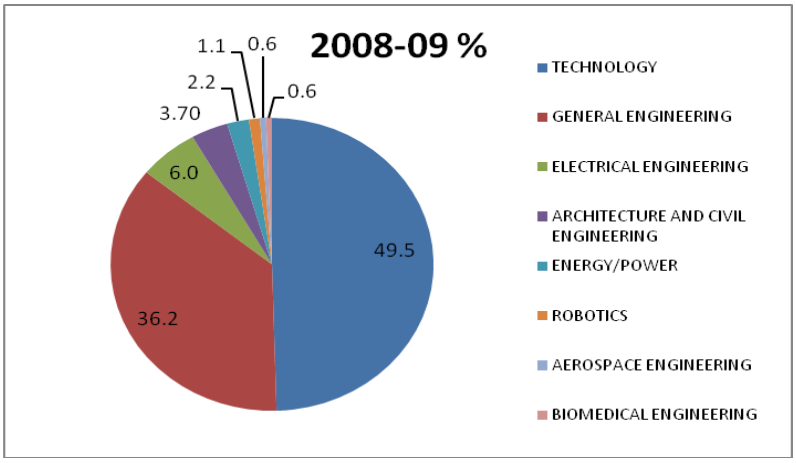
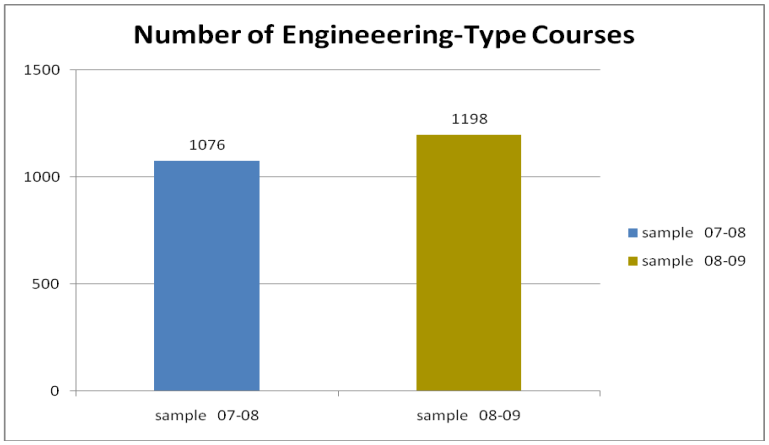


Figure 2: Percentage of Courses in each of the Eight Categories for academic year 2008-09.



There were 1076 Engineering-Type courses offered in Texas in the 2007-08 academic year and 1198 courses in the 2008-09 academic year. Figure 3 illustrates the jump of 122 courses offered from one-year-to-the-next.

Figure 3: Engineering-Type courses in Texas for academic years 2007-08 and 2008-09.



The Engineering-Type courses were taught in districts and campuses across the state. Figure 4 indicates that there were 1229 districts in the state in 2007-08 and 1235 districts in the state in 2008-09. Of those districts, 465 districts offered Engineering-Type courses in 2007-08 and 487 districts offered Engineering-Type courses in 2008-09. This is an increase of 22 districts offering Engineering-Type courses (later analysis will control for state increases in districts over time).

Figure 4: Engineering-Type Courses in Texas Districts for academic years 2007-08 and 2008-09

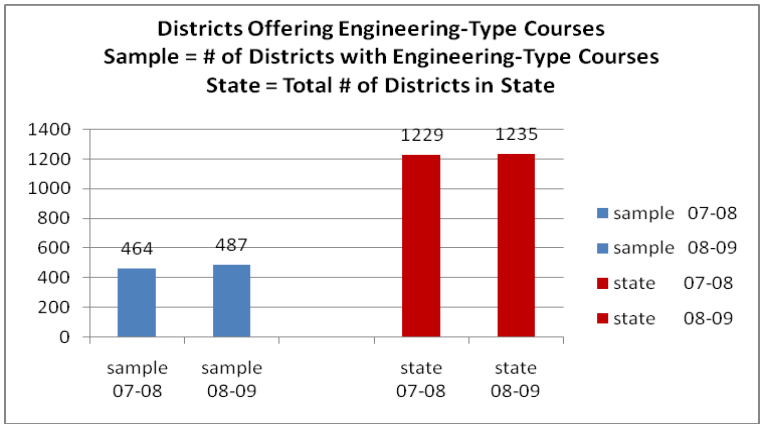
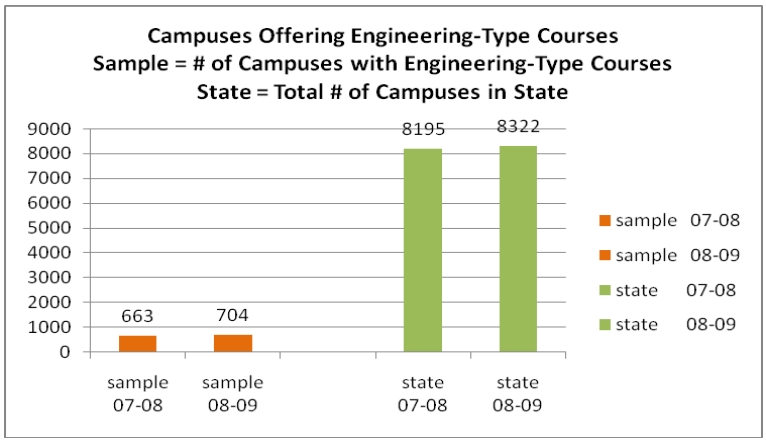


Figure 5 indicates that there were 8195 campuses in the state in 2007-08 and 8322 campuses in the state in 2008-09. Of those campuses, 663 campuses offered Engineering-Type courses in 2007-08

and 704 campuses offered Engineering-Type courses in 2008-09. This is an increase of 127 campuses offering Engineering-Type courses (later analysis will control for state increases in campuses over time).

Figure 5: Engineering-Type Courses in Texas Campuses for academic years 2007-08 and 2008-09.



Description of Teachers Teaching Engineering-Type Courses

There were 909 different teachers teaching the 1076 Engineering-Type courses in 2007-08 and 989 different teachers teaching the 1198 Engineering-Type courses in 2008-09. The teachers taught in 434 districts in 2007-08 and in 400 districts in 2008-09. Table 2 presents demographic information on teachers that teach Engineering-Type courses in Texas compared to the State averages for each characteristic.

Table 2: Demographic Information on Teachers Teaching Engineering-Type Courses for academic years 2007-08 and 2008-09

	State 2007-08	Eng. Crs. Teachers 2007-08	State 2008-09	Eng. Crs. Teachers 2008-09
Ethnicity				
White	67.5%	82.6%	66.7%	80.2%
Hispanic	21.4%	10.6%	22.1%	11.7%
African American	9.6%	5.9%	9.7%	6.9%
Asian	1.2%	0.8%	1.3%	1.1%
Gender				
Male	22.8%	81.6%	22.9%	79.1%
Female	77.2%	18.4%	77.1%	20.9%
Teaching Experience				
Aver. Yrs. Experi.	11.3 years	14.67 years	11.2 years	13.48 years

Not surprising, the three largest Education Regions have the most number of teachers teaching Engineering-Type courses. In 2008-09, Region 4 had 14.9 percent (147) of the teachers, Region 10 had 11.8 percent (117) percent of the teachers, and Region 11 had 9.9 percent (98) of the teachers who taught Engineering-Type courses in Texas. Table 3 presents the rank order by number of teacher teaching Engineering-type courses by Texas Regions for academic year 2008-09 from the region with the most teachers (Region 4) to the region with the least teachers (Region 15).

Table 3: Rank Order of Number of Teachers Teaching Engineering-Type Courses by Education Region

Region	# of Teachers of Eng-Type	% of Teachers of Eng-Type
4	147	14.9
10	117	11.8
11	98	9.9
13	94	9.5
20	72	7.3
12	60	6.1
7	48	4.9
1	47	4.8
16	42	4.2
17	39	3.9
2	34	3.4
6	28	2.8
19	28	2.8
14	23	2.3
8	22	2.2
9	19	1.9
18	19	1.9
3	18	1.8
5	17	1.7
15	17	1.7

Again, the larger districts tend to have more teachers teaching Engineering-Type courses. An interesting discovery is South Texas ISD in Region 1. This district has 17 teachers teaching these type of courses and has the third most abundant number of teachers teaching Engineering-Type courses behind that of Arlington ISD and Houston ISD.

Table 4: The Top 20 Districts With the Most Teachers Teaching Engineering-Type Courses in 2008-09.

Region	# of Teachers of Eng-Type	% of Teachers of Eng-Type
ARLINGTON ISD	36	3.0
HOUSTON ISD	24	2.0
SOUTH TEXAS ISD	17	1.4
GARLAND ISD	16	1.3
NORTH EAST ISD	16	1.3
NORTHSIDE ISD	16	1.3
DALLAS ISD	15	1.3
KATY ISD	15	1.3
PFLUGERVILLE IS	15	1.3
MESQUITE ISD	14	1.2
RICHARDSON ISD	14	1.2
CLEAR CREEK ISD	13	1.1
KILLEEN ISD	13	1.1
LEANDER ISD	13	1.1
PASADENA ISD	13	1.1
EL PASO ISD	12	1.0
FORT WORTH ISD	12	1.0
MANSFIELD ISD	12	1.0
ROUND ROCK ISD	12	1.0
AUSTIN ISD	11	.9

Description of Student Taking Engineering-Type Courses

Total number of individuals taking 24 courses Engineering-Type courses in the 2008-09 academic year was 35,017. Table 5 lists the number and percent of students taking Engineering-Type courses taught in Texas. Interesting this differs slightly from the frequency of teachers teaching Engineering-Type courses (refer back to Table 1). In the 2008-09 academic year, the most students were taking *Principals of Technology I* (24.7% of students) whereas the highest number of teachers were teaching *Agricultural Structures Technology*. The second most popular course taken by students was *Engineering Graphics* (12.6% of students); however not far behind was *Agricultural Structures Technology* (11.4% of students).

Table 5: Number of students taking Engineering-Type Courses for Academic Year 2008-09

	2008-09	2008-09
Engineering-Type Courses 2008-09	Frequency	Percent
AEROSPACE ENGINEERING		
AEROSPACE ENGINEERING (AERO)	226	0.4
ARCHITECTURE AND CIVIL ENGINEERING		
ARCHITECTURAL CONSTRUCTION-AC	1389	2.3
CIVIL ENGNRNG AND ARCHIT (CEA)	665	1.1
BIOMEDICAL ENGINEERING		
INTRO TO BIOTECH (IBIOTECH)	156	0.3
ELECTRICAL ENGINEERING		
AUDIO ENGINEERING (AD)	179	0.3
DATA ACQUISITION AND ANALYSIS	277	0.5
DIGITAL ELECTRONICS (DE-TP)	1078	1.8
ELECTRIC/ELECTRON TECH (EET)	963	1.6
ENG: THE DIGITAL FUTURE (ETDF)	718	1.2
ENERGY/POWER		
ENERGY/POWER/TRANSPORT SYSTEMS	1289	2.2
GENERAL ENGINEERING		
ENGINEER & ARCHITECT DRAFTING	125	0.2
ENGINEERING DESIGN & DEV (EDD)	1054	1.8
ENGINEERING GRAPHICS (EG)	7535	12.6
ENGINEERING PRINCIPLES (EP)	3326	5.6
INTRO ENG DESIGN (ED-TP)	4053	6.8
INTRO TO ENGINEERING DES (IED)	6044	10.1
PRINCIPLES OF ENGINEERING (POE	4969	8.3
ROBOTICS		
ROBOTICS I (ROBI)	673	1.1
ROBOTICS II (ROBII)	97	0.2
TECHNOLOGY		
AGRICULTURAL STRUCTURES TECH	6804	11.4
MANUFACTURING TECHNOLOGY (MT)	1716	209
PRINCIPLES OF TECH I (PTI)	14714	24.7
PRINCIPLES OF TECHNOLOGY II	469	0.8
TECHNOLOGY PROBLEMS/SOLUTIONS	1045	1.8

Male students take Engineering-Type courses three times more often than female students. White students are the slight majority of students taking Engineering-Type courses even though at the State level there are greater percent of Hispanic students attending public schools. Interestingly, the percent of African American students taking Engineering-Type courses is fairly close to the percent of African American's in Texas public schools.

Table 6: 2008-09 Demographic Characteristics of Students Taking Engineering-Type Courses

Characteristic	% Students Taking Eng-Type Courses	% Students in State
Gender		
Male	75.0%	51.3%
Female	25.0%	48.7%
Ethnicity		
White	43.0%	34.0%
Hispanic	41.1%	47.9%
African American	12.4%	14.2%
Asian	3.0%	3.6%
Native	< 1.0%	0.4%

Survey District Plans for Offering Engineering Courses across Texas

The following were submitted as suggestions for questions to ask the district administrative staff about district plans for implementing a course in engineering.

Draft of Survey Questions (Preliminary)

I have listed some preliminary ideas for survey questions. The questions will of course, ultimately be presented in a user-friendly survey format such as SurveyMonkey:

Which of the following courses (from 19 TAC 112) are you planning to offer for a fourth year of science?

Which of the following courses (from 19 TAC 112) are you will be a new course or in-addition to what you currently are offering for a fourth year of science?

- Biology
- Chemistry
- Physics
- Astronomy
- Aquatic Science
- Environmental Systems
- Earth and Space Science
- Advanced Placement Biology
- Advanced Placement Chemistry
- Advanced Placement Physics B
- Advanced Placement Physics C
- Advanced Placement Environmental Science
- International Baccalaureate Biology
- International Baccalaureate Chemistry
- International Baccalaureate Physics
- International Baccalaureate Environmental Systems

- Scientific Research and Design (CTE)
- Anatomy and Physiology of Human Systems (CTE)
- Medical Microbiology and Pathophysiology (CTE)
- Principles of Technology I (CTE)
- Principles of Technology II (CTE)
- Engineering (CTE)
- Concurrent enrollment in college courses

Why and how did you choose the fourth year of science courses you will be offering? Please describe.

If your district will be offering a new course how are you preparing?

What type of professional development are you planning?

Have you written or are you in the process of writing curriculum for the new course? If so, what type of process and who have you included in the process of curriculum writing?

Have you hired teacher(s) to teach the new course(s)? If not, are you in the process of recruiting teacher(s) to teach the new course(s)?

How many teachers do you believe you will need to teach the additional science course(s)?

Random Sample of Districts

At stratified random sample was completed. A random sample was created in a statistical package.

Examine High School Students

The examination of Austin Independent School District students (AISD) was not able to be performed since the data have not yet been received by the evaluator. Once data is received, a thorough analysis will be made.

Additional Data Collected

2009 UTeachEngineering Teacher Participant Results

A key goal of the *UTeachEngineering* program is to reach a diverse population of teachers (directly) and students (indirectly). One of the strategies is to target in-service teacher recruitment efforts in districts and geographic regions of the state with high concentrations of historically underrepresented populations. In particular, teachers will be recruited from urban centers and the

Texas-Mexico border. This updated report, includes all three 2009 *UTeachEngineering* sites for summer 2009 participants.

There were 56 *UTeachEngineering* summer 2009 participants. These 56 teachers come from 24 different central Texas public school districts (including one Charter) and 40 campuses. One high school sent 3 teacher participants, seven of the campuses sent 2 teacher participants the rest of the campuses each sent one teacher participant.

Forty-nine of the participants were assigned to high schools, three were assigned to middle schools, two were assigned to elementary schools, one was assigned at a Charter school, one was assigned at an alternative school, and two participants did not have school assignments. The teacher experience ranges from 1 to 34 years with an average of 9.3 years.

The participant breakdown by ethnicity was 26 white participants, 20 Hispanic participants, 5 African American participants, and 3 participants listed as *other*. All teachers hold a teaching certificate they earned either through attending an Alternative Certification program (33 teachers) or a Traditional Certification program (21 teachers). Several of the teacher participants have a certificate in more than one subject area. Eighteen participants held a Composite Science certificate. The information provided by the teachers at the time of the application to the program is incomplete regarding the exact certificates; this was a fill in the blank type of response option. A question requesting the exact type of certification was recommended for a fall survey (See Appendix A). Table 7 lists the information downloaded from the program application regarding type of teaching certificate the participants hold and the type of certification route:

Table 7: Certification Information Received from the Application to *UTeachEngineering*

	Reported Certification	Reported Route
1	“Mathematics k-12”	Alternative
2	“Math, Physics, Physi”	Alternative
3	“Physical Sciencs, Ph”	Traditional
4	“Biology, chemisty”	Traditional
5	“Composite science, E”	Traditional
6	“Region XIII”	Alternative
7	“Comp. Science”	Traditional
8	“Region X”	Alternative
9	“Secondary Science Co”	Alternative
10	‘Science Composite 8-“	Alternative
11	“Mathematics (8-12)”	Traditional
12	“Art”	Traditional
13	“Technology Education”	Alternative
14	“SPED”	Alternative
15	“Secondary Mathematic”	Alternative
16	“4-12 Science (Compos”	Alternative
17	“Science Composite”	Traditional
18	“HS Math for TX and 7”	Traditional
19	“Biology and Science Composite”	Alternative
20	“Theater, Tech Apps, PLTW”	Alternative
21	“Math/Physics 9-12”	Traditional
22	“Math”	Traditional
23	“chemistry, science c”	Alternative
24	“Math/Physics”	Alternative
25	“7-12, life”	Traditional
26	“Composite Science”	Traditional
27	“Composite Science”	Traditional
28	“Physical Science”	Alternative
29	“COMPOSITE SCIENCE – GIFTED ED”	TRADITIONAL
30	“6-12 Science Composite”	Alternative
31	“Physical Science and”	Traditional
32	“Mathematics/ Physics (8-12)”	Out of country
33	“Technology Education”	Alternative
34	“Professional- Chemistry/Biology”	Traditional
35	“Science 4-8”	Alternative
36	“Composite Science 8-12, ESL Supplemental	Alternative
37	“Trades & Industry, T”	Alternative
38	“n/a”	Alternative
39	“4-8 Generoliot”	Alternative
40	“Physics, Chemistry”	Traditional
41	“Science, Health, Soc”	Alternative
42	“1”	Alternative
43	“SIOP 8-12 Social Stu”	Alternative
44	“4-8 Math/Science”	Traditional
45	“Social Studies comp”	Traditional
46	“Bilingual-Technology”	Traditional
47	“EC 4th Bilingual Ed”	Alternative
48	“Composit Science”	Alternative
49	“Math 8-12”	Alternative
50	“Math, Physics”	Traditional
51	“Composite Science 8-“	Alternative
52	“Math 9-12”	Alternative
53	“Industrial Technolog”	Traditional
54	n/a	Alternative
55	“Technology Education”	Alternative
56	“Mathematics k-12”	Alternative

These 56 teachers come from 24 different central Texas public school districts (including one Charter) and 40 campuses (Listed in Table 8). Texas Education Agency's Academic Excellence Indicator System (AEIS), for the 2007-2008 school year, reports both the state accountability ratings and the AYP ratings (See Table 8). As Table 8 illustrates, although many participant campuses fair well in the state ratings, many of the campuses are not meeting the AYP requirements.

Table 8: State Reported 2008 Accountability Ratings and the Federally Required AYP Ratings.

District/Campus	2008 Accountability Rating*	Federal Adequate Yearly
District A	Academically Acceptable	Meet AYP
Campus A1	Recognized	Meet AYP
District B	Academically Acceptable	Meet AYP
Campus B1	Academically Acceptable	Missed AYP
Campus B2	Academically Acceptable	Missed AYP
Campus B3	Academically Acceptable	Missed AYP
Campus B4	Academically Acceptable	Missed AYP
Campus B5	Academically Acceptable	Missed AYP
Campus B6	Academically Acceptable	Missed AYP
Campus B7	Academically Acceptable	Meet AYP
Campus B8	Recognized	Meet AYP
Campus B9	Academically Acceptable	Not evaluated
District C	Academically Acceptable	Meet AYP
Campus C1	Academically Acceptable	Missed AYP
District D	Academically Acceptable	Meet AYP
Campus D1	Academically Acceptable	Not evaluated
District E	Academically Acceptable	Meet AYP
Campus E1	Exemplary	Meet AYP
District F	Recognized	Meet AYP
Campus F1	Academically Acceptable	Meet AYP
Campus F2	Exemplary	Meet AYP
District G	Academically Acceptable	Meet AYP
Campus G1	Academically Acceptable	Missed AYP
Campus G2	Academically Acceptable	Missed AYP
Campus G3	Academically Acceptable	Missed AYP
District H	Recognized	Meet AYP
Campus H1	Academically Acceptable	Missed AYP
District I	Academically Acceptable	Meet AYP
Campus I1	Academically Acceptable	Missed AYP
District J	Academically Acceptable	Meet AYP
Campus J1	Recognized	Meet AYP
District K	Recognized	Meet AYP
Campus K1	Recognized	Meet AYP
District L	Academically Acceptable	Missed AYP
Campus L1	Recognized	Meet AYP
District M	Academically Acceptable	Meet AYP
Campus M1	Not rated	Not evaluated
District N	Academically Acceptable	Meet AYP

Campus N1	Academically Acceptable	Missed AYP
District O	Academically Acceptable	Missed AYP
Campus O1	Academically Unacceptable	Missed AYP
District P	Recognized	Meet AYP
Campus P1	Academically Acceptable	Missed AYP
District Q	Academically Acceptable	Meet AYP
Campus Q1	Academically Acceptable	Meet AYP
Campus Q2	Recognized	Meet AYP
District R	Academically Acceptable	Missed AYP
Campus R1	Academically Acceptable	Missed AYP
Campus R2	Academically Acceptable	Missed AYP
Campus R3	Academically Acceptable	Missed AYP
Campus R4	Academically Acceptable	Meet AYP
Campus R5	Recognized	Meet AYP
District S	Academically Acceptable	Missed AYP
Campus S1	Academically Acceptable	Missed AYP
District T	Academically Acceptable	Missed AYP
Campus T1	Academically Acceptable	Missed AYP
District U	Academically Acceptable	Missed AYP
Campus U1	Not rated	Not evaluated
District V	Academically Acceptable	Missed AYP
Campus V1	Academically Acceptable	Meet AYP
Campus V2	Academically Acceptable	Missed AYP
District W	Academically Acceptable	Missed AYP
Campus W1	Academically Acceptable	Missed AYP
District X- Charter	Exemplary	Meet AYP
Campus X1	Exemplary	Meet AYP

*Accountability Rating: This refers to the district and campus ratings assigned by the Texas 2008 state accountability system. Districts and campuses are evaluated on performance on the TAKS, completion rate and annual dropout rate. Possible ratings are: Exemplary, Recognized, Academically Acceptable, Academically, Unacceptable, or Not Rated.

Table 9 lists the district demographic characteristics of the 24 districts the 2009 teacher participants teach in. District L is the largest district teachers teach in. District T has the highest percent of Economically Disadvantaged students.

Table 9: *UTeachEngineering* Participant District Demographic Information 2008-09.

DISTRICT	%ECODIS	%WHITE	%AFA	%HISP	%NATIVE	%ASIAN	# Student
A	10.0	83.4	0.7	14.0	0.4	1.5	4,010
B	60.8	26.4	12.1	58.0	0.2	3.3	82,181
C	42.6	32.0	22.8	36.2	0.2	8.9	20,707
D	67.9	13.6	26.8	57.5	0.1	2.1	5,825
E	2.5	82.6	0.9	6.7	0.3	9.4	7,306
F	11.0	79.4	1.5	15.1	0.5	3.6	5,854
G	23.6	53.1	10.4	25.3	0.4	10.8	40,398
H	15.7	73.0	4.3	14.5	0.5	1.5	13,892
I	23.8	62.2	12.1	22.1	0.5	3.2	22,276
J	15.9	52.6	10.6	17.2	0.4	19.2	53,439
K	14.0	74.9	6.8	16.0	0.5	1.8	2,665
L	84.7	4.8	28.7	65.3	0.2	1.0	157,605
M	46.5	30.4	18.5	42.8	0.5	7.8	56,593
N	72.7	16.0	12.2	67.3	0.4	4.1	32,707
O	76.0	3.0	79.3	17.3	0.2	0.2	6,180
P	49.6	32.9	25.8	33.4	0.4	7.5	34,091
Q	21.9	61.1	8.9	20.4	0.5	9.1	49,449
R	68.2	12.2	4.8	81.3	0.3	1.4	61,839
S	80.8	5.6	2.2	91.5	0.4	0.3	44,770
T	100.0	2.6	0.8	96.7	0.0	0.0	777
U	78.0	4.6	0.6	94.3	0.1	0.4	5,617
V	72.9	4.3	1.8	93.1	0.4	0.5	38,696
W	93.9	1.4	0.1	98.5	0.0	0.0	2,510
X	86.2	6.0	2.8	90.3	0.0	0.9	463
STATE	55.3	34.8	14.3	47.2	0.3	3.4	

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Appendix A

UTeachEngineering Teacher Survey Questions

1. Name: [BOX]

2. School: [BOX]

3. How many years of teaching experience do you have? [BOX]

4. What Texas teaching certifications do you hold? Check all that apply.

Agricultural Science and Technology
Bilingual Education
Biology
Chemistry
Computer Science
Early Childhood
Engineering
English as a Second Language (ESL)
English/Language Arts (ELA) and Reading
Generalist Education
Gifted and Talented (GT)
Health
History
Life Science
Physics
Mathematics
Mathematics/Physical Science/Engineering
Physical Education (PE)
Physical Science
Science Composite
Social Studies Composite
Spanish
Special Education
Technology Applications
Other – please specify [BOX]

5. Since the summer program, have you or are you planning on taking any new certification exams?

[Yes/No Boxes]

5a. If you answered yes to the above question, please check all exams you are planning to take or have taken since the summer program? (Will only pop up if answered yes to question #4)

Agricultural Science and Technology
Bilingual Education
Biology
Chemistry
Computer Science
Early Childhood
Engineering
English as a Second Language (ESL)
English/Language Arts (ELA) and Reading
Generalist Education
Gifted and Talented (GT)
Health
History
Life Science
Physics
Mathematics
Mathematics/Physical Science/Engineering
Physical Education (PE)
Physical Science
Science Composite
Social Studies Composite
Spanish
Special Education
Technology Applications
Other – please specify [BOX]

6. What courses are you teaching this year and approximately how many students are in each course, have taught this course previously, and finally is this a new course (first year taught) at your campus? [Please give the official name for each course and the PEIMS code for the course – if you know it] (a table in Survey Monkey with columns for each response)

[Four boxes to fill in for different preps]

7. Please rate how supportive you feel your campus has been on the following items

(Likert Scale for each) [Not at All] [Somewhat] [Moderately] [To a Great Extent] [NA]

7a. To what extent has your campus leadership and support team aware of your participation in the UTeach Engineering program.

Team Teachers

Department

Administration

7b. To what extent has your campus leadership and support team supported you in incorporating new lessons and teaching tools learned this summer.

Team Teachers

Department

Administration

8. How much of what you have learned during the summer program are you able to incorporate into your classes this year (both teaching strategies and lesson plans)?

[None] [A Little Amount] [A Fair Amount] [A Moderate Amount] [A Huge Amount]

9. Please describe three lessons or strategies you learned from the summer program that you are planning to use in your classroom this year.

[Three open-ended boxes]