



TEXAS

Creating Meaningful and Immersive

Visualizations in Tableau:

An Incremental Approach

Al Walser - UT Austin

## OUTLINE

This session is for IR professionals

Getting from here to there

Basic Tableau connectivity

Embedding your visualization

Unbox Tableau: THECB reports

Key points to remember



# TEXAS

Who is using Tableau or plans to?





# TEXAS

Getting from here to there



Change is **inevitable**, but scary for some.

☰ **Year : 2014** (48)

---

⊕ Section : Student (25)

⊕ Section : SCH (6)

⊕ Section : Finance (3)

⊕ Section : Faculty (10)

⊕ Section : Degree (4)

before tableau



☰ **Year : 2015** (53)

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⊕ Section : Student (31)

⊕ Section : SCH (4)

⊕ Section : Finance (3)

⊕ Section : Faculty (10)

⊕ Section : Degree (5)

after tableau

Change is **necessary**, but scary for some.

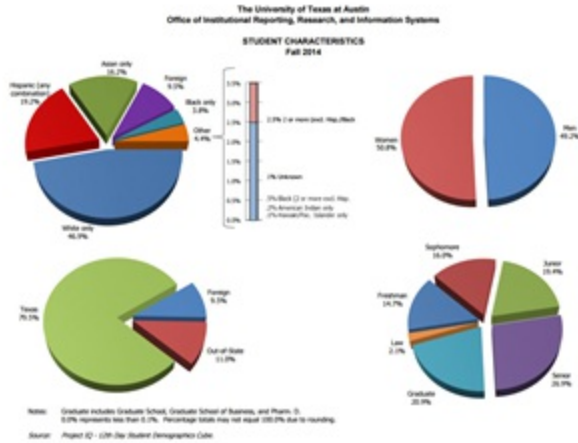
Name
IMA_S_DistByLevelAge_Current
IMA_S_EnrClassGender_Current
IMA_S_EnrColDeptLvl_current
IMA_S_EnrColLvlRaceGen_Current
IMA_S_EnrFTPTStatus_Current
IMA_S_EnrLvlRace_Current
IMA_S_EnrLvlRes_Current
IMA_S_EnrOrigResSum_Current
IMA_S_EnrOrigRes_CountyStateCountry
IMA_S_EnrRaceGen_Current
IMA_S_EnrSemGen_current
IMA_S_FTICFlow_current
IMA_S_GpaUGColClassGen_Current
IMA_S_NewEnrGroupRace_current
IMA_S_NewEnrGroupRes_current
IMA_S_NewStuEnrChart_current
IMA_S_ProfileFTIC_Current
IMA_S_ProfileUGTransfer_Current
IMA_S_TransferFlow_current
IMA_S_UGTransferFrom_Current
Student Characteristics



Data Source
FreshmenApps (IRRIS_SH_FTIC_AppAdmitEnroll)
IRRIS HouseMembers Extract
IRRIS_Confidentiality
IRRIS_FACULTY_PROMOTION_STAR
IRRIS_SH_DegreesConferred
IRRIS_SH_Faculty
IRRIS_SH_FacultyStudentRatios
IRRIS_SH_SCH
<b>IRRIS_SH_StudentDemographics</b>
IRRIS_SH_TeachStaffStudentRatios
IRRIS_SH_TransferFlow
IRRIS_SH_UGInstructionalPatterns
IRRIS_SH_UndergraduateFlow
IRRIS_SH_UndergraduateFlow-Previous
TransferApps (IRRIS_SH_Transfer_AppAdmitEnroll)



# TEXAS

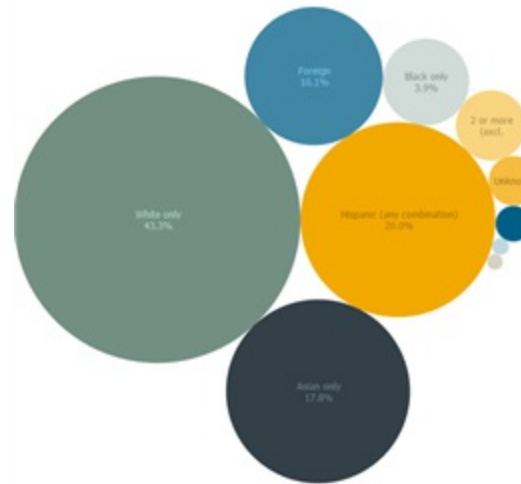


Same great data,  
fresh new taste



## Student Demographics Fall Enrollment by Ethnicity

Fall 2016



White only	22,227	43.3%
Hispanic (any combination)	18,245	26.8%
Black only	2,825	3.9%
Black (2 or more, excl. Hisp.)	346	0.7%
Asian only	9,155	17.8%
American Indian only	77	0.2%
Hawaiian/Pac. Islander only	67	0.1%
2 or more (excl. Hisp./Black)	1,317	2.6%
Foreign	5,167	15.1%
Unknown	665	1.3%
<b>Total UT Austin</b>	<b>51,331</b>	



\*Percentage totals may not equal 100% due to rounding. Foreign student figures include foreign exchange students.

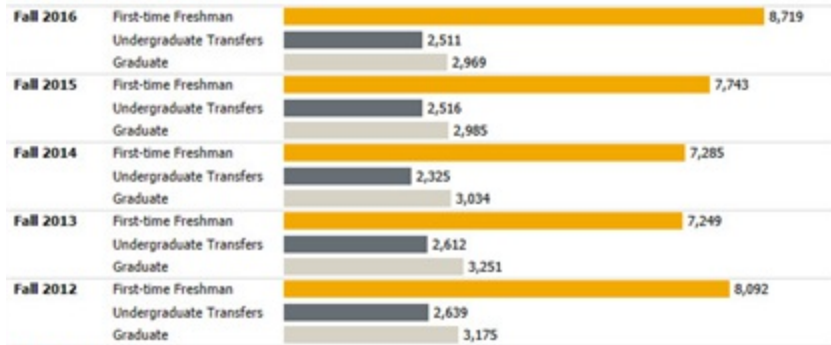
Leverage existing  
reports, re-imagine  
with Tableau

## Approach change incrementally

### Student Demographics

#### Profile of New Student Enrollment - Chart - Fall Semesters

##### Fall and Summer Entrants Combined



##### Notes for Fall and Summer Entrants Combined:

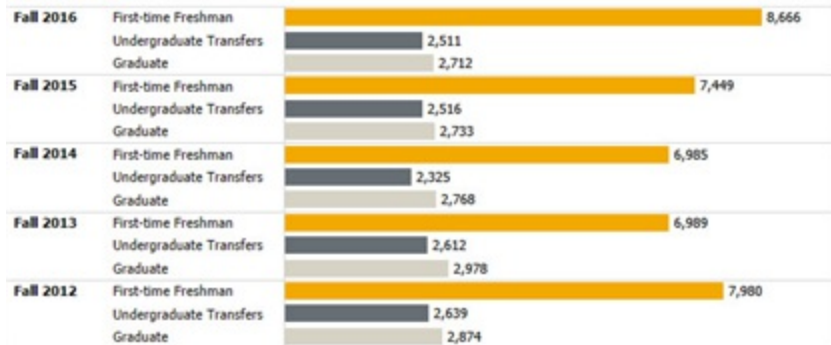
- First-time freshmen include those entering students enrolled in the fall term who attended college for the first time in the prior summer term, as well as the new fall entrants. Also included are entrants registered in the parallel enrollment program and individual approvals.

- Undergraduate Transfers include fall entrants only.

- Graduate (Graduate School, Graduate School of Business, and Pharm. D.) includes those students enrolled in the fall term who entered graduate programs for the first time.



##### Fall Entrants



##### Notes for Fall Entrants Only:

- First-time freshmen also include students registered in the parallel enrollment program and individual approvals. Students entering during the summer semester through the Summer Freshman Admission, Provisional, Preview, and Gateway Programs are reported as continuing and are excluded from these new freshmen counts.

- Undergraduate Transfers include fall entrants only.

- Graduate includes Graduate School, Graduate School of Business, and Pharm. D.

Example: Adopt new methodologies such as adjusting charts so newest information is first.

\* Foreign student figures include foreign exchange students. Percentage totals may not equal 100.0% due to rounding.





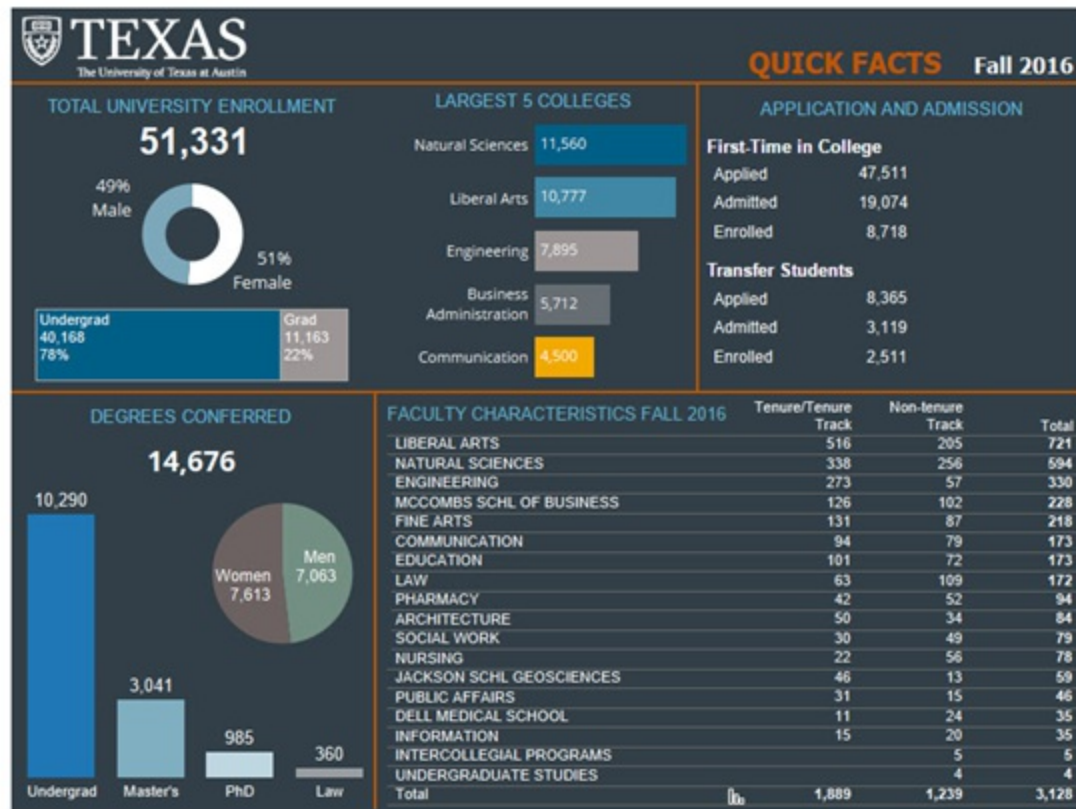
# TEXAS

## Statistical Handbook

Statistical Handbooks contain information about the most recent fall data as well as the prior academic year. For example, the 2009-10 handbook will have the fall enrollment data for 2009 and the academic year degree information for 2008-09. The Statistical Handbook provides information about UT Austin's student, faculty, staff, and degree characteristics.

<a href="#">1980-81 &gt;</a>	<a href="#">1981-82 &gt;</a>	<a href="#">1982-83 &gt;</a>
<a href="#">1983-84 &gt;</a>	<a href="#">1984-85 &gt;</a>	<a href="#">1985-86 &gt;</a>
<a href="#">1986-87 &gt;</a>	<a href="#">1987-88 &gt;</a>	<a href="#">1988-89 &gt;</a>
<a href="#">1989-90 &gt;</a>	<a href="#">1990-91 &gt;</a>	<a href="#">1991-92 &gt;</a>
<a href="#">1992-93 &gt;</a>	<a href="#">1993-94 &gt;</a>	<a href="#">1994-95 &gt;</a>
<a href="#">1995-96 &gt;</a>	<a href="#">1996-97 &gt;</a>	<a href="#">1997-98 &gt;</a>
<a href="#">1998-99 &gt;</a>	<a href="#">1999-00 &gt;</a>	<a href="#">2000-01 &gt;</a>
<a href="#">2001-02 &gt;</a>	<a href="#">2002-03 &gt;</a>	<a href="#">2003-04 &gt;</a>
<a href="#">2004-05 &gt;</a>	<a href="#">2005-06 &gt;</a>	<a href="#">2006-07 &gt;</a>
<a href="#">2007-08 &gt;</a>	<a href="#">2008-09 &gt;</a>	<a href="#">2009-10 &gt;</a>
<a href="#">2010-11 &gt;</a>	<a href="#">2011-12 &gt;</a>	<a href="#">2012-13 &gt;</a>
<a href="#">2013-14 &gt;</a>	<a href="#">2014-15 &gt;</a>	<a href="#">2015-16 &gt;</a>
<a href="#">2016-17 &gt;</a>		

We still offer our complete statistical handbook in PDF format (built in Tableau)



We also built small, interactive and embedded visualization on our homepage for users to get accustomed to new data format.



[Home](#) > [Spotlight on Data](#)

## The University of Texas at Austin - Quick Charts

### [New Student Enrollment](#)

This graph displays University enrollment of new students by their ethnicity as originally self-reported to UT Admissions. There is also an accompanying table. Use the download icon to download the pdf or the image. (NOTE: First-time freshmen include those entering students enrolled in the fall term who attended college for the first time in the prior summer term, as well as the new fall entrants. Also included are entrants registered in the parallel enrollment program and individual approvals.)

[View Details](#)

UT Austin Fall Enrollment by New Student Group



### [University Enrollment by Level](#)

This chart displays University enrollment of students by level. There is also an accompanying table breaking out enrollment by gender and full-time/part-time status. Use the download icon to download the pdf or the image.

[View Details](#)

UT Austin Fall Enrollment by Level

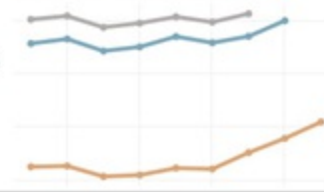


### [University Graduation Rates: 4, 5, and 6 Year](#)

This chart displays graduation rates by entering cohort for the most recent graduation year available. There is also an accompanying table. Use the download icon to download the pdf or the image. (NOTE: Intercollegial Programs are administered by various schools and colleges. Not all programs appear every year.)

[View Details](#)

UT Austin Graduation Rates: 4, 5, and 6 Year



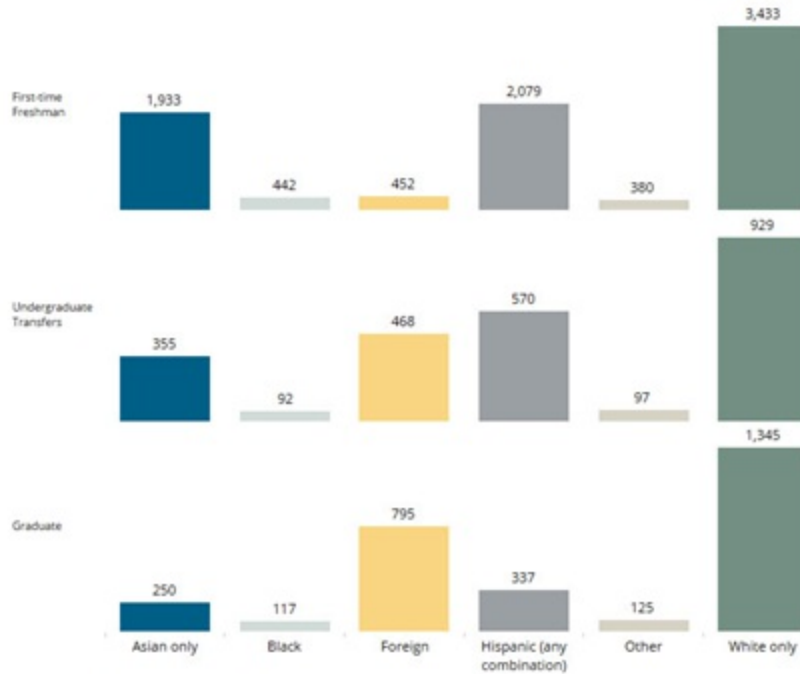
Replace static charts with  
embedded Tableau  
Visualizations



# TEXAS



## UT Austin Fall Enrollment by New Student Group Fall 2016



Source: IRRIS - Cognos 12th Class Day Student Reports.

Notes: IPEDS definition. First-time freshmen include those entering students enrolled in the fall term who attended college for the first time in the prior summer term, as well as the new fall entrants. Also included are entrants registered in the parallel enrollment program and individual approvals. Undergraduate Transfers include fall entrants only. Graduate (Graduate School, Graduate School of Business, and Pharm. D.) and Law include those students enrolled in the fall term who entered graduate programs or Law School for the first time in the prior summer term, as well as new fall entrants.



To download the chart, click any where on the chart then click on the download button at the bottom of this page. To download the pdf, click anywhere in the table then click the download button at the bottom of this page.

Select College

(All)

Select Department

(All)

	Fall 2016
<b>First-time Freshman</b>	
Asian only	1,933
Black	442
Foreign	452
Hispanic (any combination)	2,079
Other	380
White only	3,433
<b>Total</b>	<b>8,719</b>
<b>Undergraduate Transfers</b>	
Asian only	355
Black	92
Foreign	468
Hispanic (any combination)	570
Other	97
White only	929
<b>Total</b>	<b>2,511</b>
<b>Graduate</b>	
Asian only	250
Black	117
Foreign	795
Hispanic (any combination)	337
Other	125
White only	1,345
<b>Total</b>	<b>2,969</b>
<b>Total</b>	<b>14,199</b>



## Table of Contents

### [Quick Tableau Introduction](#)

#### Downloading Data

- [What](#)
- [Where](#)

#### Filtering

- [Selecting](#)
- [Removing](#)
- [Understanding](#)

#### [Making Selections](#)

#### [Columns/Row Header Functions](#)

#### [Toolbar Functions](#)

## Tableau User Guide

Provide users with tools for success

### Quick Tableau Introduction

Look for these three icons through IRRIS visualizations.

Use the tabs along the top of each page to navigate between reports.

Download underlying dataset.

View documentation and definitions.

Display this guide.

Hover over data points to see more details.

Undo changes.

Reload original visualization.

This gray area along the bottom is the Tableau toolbar. For detailed information, click [Toolbar Functions](#) in the Table of Contents.

Filter by Voting Year: All Votes After: [All] [All] [All]

Filter by College: Select one or All [All]

Filter by department: Select as many as you like [All]

Filter by Ethnicity/Race: American Indian or Alaska Native, Asian

Gender: Female, Count of Gender: 3,595

Highlight by Response: Yes, No, Tie

Departments: Radio, Television, Journalism, Communication, Public Relations, Advertising


Department	Freshman	Sophomore	Junior	Senior	Graduate
Radio, Television	2	0	0	0	0
Journalism	0	0	0	0	0
Communication	16	3	0	0	0
Public Relations	9	0	0	0	0
Advertising	13	1	1	13	2

The University of Texas at Austin  
 Institutional Reporting, Research  
 and Information Systems

Tableau provides some helpful materials at their [Starter kits](#).



# TEXAS

tuition and fees: non-residents	Net tuition as a fraction of parental income	What is cumulative net tuition?	Cumulative net tuition of FTIC graduates	Cumulative net tuition and time to degree: residents	Cumulative net tuition and time to degree: non-residents	About these data 
---------------------------------	--	---------------------------------	--	--	--	--

- The sources of these data include disbursed award code amounts from the Office of Financial Aid (OFA) and snapshots of fee bills from the Office of Accounting. All cumulative net tuition data is summed through summer 2016.

- Amounts are adjusted to 2015 dollars using the annual average from the Bureau of Labor Statistics' Consumer Price Index for All Urban Consumers (CPI-U).

- Listed tuition is the sum of the students' fall and spring semester flat-rate tuitions.

- Financial aid includes scholarships (federal, state, institutional, private, and departmental); grants (federal, state, and institutional); tuition exemptions (exempts all or part of a student's tuition and fees) and waivers (exempts the non-resident portion of tuition); and, any other direct payment toward tuition that is not made by the student and does not go through normal financial programs or scholarships (e.g., aid through 26-account/contracts and grants research services, as provided by outside sponsors and agencies to provide support for specific research or educational programs).

- Parent income is categorized from parents' adjusted gross income (AGI) reported on the FAFSA (Free Application for Federal Student Aid). This information is additionally captured for international students who qualify for Texas residency and thus submit a printed copy of the FAFSA to OFA to apply for state-funded financial aid. Students who do not have a reported parent AGI value on the FAFSA or who do not submit a FAFSA are categorized as unknown/unreported.

- Entering FTIC cohort is determined by first mode of admission to and first semester enrolled at the University. Included students had first modes of admission from Texas high schools, out-of-state high schools, and Summer Admissions. Also included were students whose first mode of admission was through the parallel enrollment program who also went on to enroll after high school; their first semester enrolled is tied to their initial enrollment. Each FTIC

- Residency Status is whether the student is a Texas resident or a non-resident of Texas. Non-residents include international students. Residents include students who meet the criteria of Texas House Bill 1403 or Senate Bill 1528 and therefore qualify for in-state tuition. Residency Status from the first semester of enrollment is used for entering FTIC cohorts.

- Students considered in net tuition analyses are undergraduate students enrolled at UT Austin in both the fall and spring semesters of the same academic year taking 12 or more semester credit hours, including transfer students.

- Students considered in cumulative net tuition analyses have been categorized as either graduates or non-graduates based upon degree data from the Office of the Registrar as of fall 2016. Non-graduates are students who have not earned an undergraduate degree from the University. Graduates can be further classified by when they graduated: in 4 years or less, 5 years, or 6 years or more. For summer and fall entrants, they would need to graduate during or before the summer following the 4th/5th academic year to be counted in the 4/5-year graduation rates (e.g., 4 years is 8 possible long semesters and 4 possible summer semesters or 5 possible summer semesters for students who started in the summer). For spring entrants, their academic year is spring-to-spring and they would need to graduate during or before the fall of their 4th/5th academic year (e.g., 4 years is 8 possible long and 4 possible summer semesters).

- Students who entered a professional program prior to earning their Bachelor's degree are excluded (e.g., Integrated BS/MS in Computer Science, Integrated BBA/MPA in Accounting, Pharm.D.).

For questions about these data contact [ima@austin.utexas.edu](mailto:ima@austin.utexas.edu).

Provide users with tools for success



# TEXAS

A few thoughts...

It's never as simple as replacing a report - you have to retrain the brain

Once you start replacing, be sure to provide users with "how-to" tools

Remember to adopt and adhere to best practices

Begin shifting responsibility to the user

Be ready to defend your viz!



# TEXAS

So, now you're ready to dig in.  
First, a few tips.

## Plan your migration

- Prioritize which reports to upgrade
- Consolidate/Eliminate redundancy
- Develop best practices beforehand
- Have a communication plan ready
- Develop user guide or FAQ

## Plan your connection

- Existing warehouse
- Flat file
- Combination of both

## Use Tableau efficiently

- Calculated fields
- Organize data fields



General Filters

Owner

Tag

Modified on or after

Modified on or before

- Only my favorites
- Only my recently viewed
- Has an alert



IRRIS Quick Charts  
266 views ☆ 0



StatHandbook\_StudentSection  
135 views ☆ 0



Research - Affordability - Net Tuition  
110 views ☆ 0



Flow Projections- DRAFT- 2016.03.25  
75 views ☆ 0



UT Strategic Overview - IRRIS edit  
65 views ☆ 0



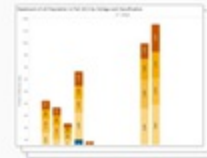
StatisticalHandbook\_StudentDemc  
57 views ☆ 0



Research - Affordability - Financial Aid  
46 views ☆ 0



StatHandbook\_SCHSection  
46 views ☆ 0



JZL stat handbook testing  
35 views ☆ 0



StatHandbook\_DegreeSection  
32 views ☆ 0

You can publish your visualizations via Tableau website









## Time to unbox Tableau

### T ★ E ★ X ★ A ★ S HIGHER EDUCATION DATA

Overview (Quick Links) | External Data Resources | Online Applications | Workforce | Higher Education Topics | High School to College (P-16) | Reports

- Polymakers**  
Accountability, almanac, financials...
- Parents, Students & K-12 Educators**  
Online Resume, H.S. to college stats...
- Media**  
Overview, Almanac, Press Releases...
- Institutions and Researchers**  
Reporting data, statistics...
- Career and Workforce Educators**  
Perkins, WECM, Workforce Topics...

[Home](#)

#### CBM Reporting Manuals

##### CBM Reporting Manuals

- Career Schools and Colleges and Private and Out-of-State Public Postsecondary Institutions ([PDF](#))
- Community, Technical and State Colleges ([PDF](#))
- Health-Related Institutions ([PDF](#))
- Independent Colleges and Universities ([PDF](#))
- Public Universities ([PDF](#))

##### Documentation of Changes to CBM Reports (as of Summer 2011)

- Community, Technical and State Colleges ([PDF](#))
- Health-Related Institutions ([PDF](#))
- Independent Colleges and Universities ([PDF](#))
- Public Universities ([PDF](#))

##### Appendices to the CBM Reporting Manuals

- Appendix A-J and N-P - FICE Codes, Residence Codes, CIP Codes, Administrative Unit Codes, Facilities Codes, GME Formula Funding and Space Model Funding, Reference Tables ([PDF](#))
- Appendix K - ACGME and AOA Residency Programs in Texas ([XLS](#))
- Appendix L - Medical Schools ([XLS](#))
- Appendix M - Texas CEEB Codes ([XLS](#))
- Appendix Q - Guidelines for Reporting First College-Level Courses ([PDF](#))

#### Latest News

- 02/14/2017 [Academic Performance of 2-Year College Transfer Students - Fall 2015](#)
- 02/13/2017 [Perkins Core Indicator Data Updated](#)
- 02/08/2017 [Dual Credit Enrollment Data Updated](#)



# TEXAS

**Data** | Analytics | Pages | Columns | Rows | CF: Ethnicity

**Dimensions**

- CF: Age Group
- CF: Correct DOB
- CF: Ethnic Origin Description
- CF: Ethnicity
- CF: First Time Group
- CF: FTIC High School
- CF: Location
- CF: On/OFF SCH not equal Sum UG
- CF: Program Description
- CF: Racial Category
- CF: Residence
- CF: Tuition Status
- EID
- Ethnic Origin
- Exact Age
- ID
- Item1 Record Code
- Item11 Doctoral Hrs Funded

**Measures**

- CF: Attempted in Doctoral Courses
- CF: Average Age
- CF: Collegiate State Funded
- CF: Collegiate UG Not State Funded
- CF: Developmental Not State Funded
- CF: Developmental State Funded
- CF: Graduate Off-Campus SCH
- CF: Graduate On-Campus SCH
- CF: Graduate SCH of Seniors
- CF: Inter-Institutional Not State Funded
- CF: Inter-Institutional State Funded
- CF: SCH Off-Campus
- CF: SCH On-Campus
- CF: Subtotal of SCH Values
- CF: Sum On/OFF Campus
- CF: Sum UG Fields
- CF: Total Graduate On/OFF Campus SCH
- CF: Vet Med Special Professional
- Item10A SCH On Campus

**Columns**

Ethnicity	
A. White	24,087
B. Black	1,976
C. Hispanic	10,209
D. Asian	8,802

**Filters**

**Marks**

CF: Racial Category

```

ISNULL([Item39B Black]) AND
ISNULL([Item39C Asian]) AND
ISNULL([Item39G Native Hawaiian])
THEN 'F. American Indian/Alaskan Native only'

ELSEIF [Item39G Native Hawaiian] = '8' AND
ISNULL([Item39A White]) AND
ISNULL([Item39B Black]) AND
ISNULL([Item39C Asian]) AND
ISNULL([Item39D American Indian])
THEN 'H. Native Hawaiian/Other Pacific Islander only'

ELSEIF [Item39E International] = '6' AND
ISNULL([Item39A White]) AND
ISNULL([Item39B Black]) AND
ISNULL([Item39C Asian]) AND
ISNULL([Item39D American Indian]) AND
ISNULL([Item39G Native Hawaiian])
THEN 'G. International only'

ELSEIF [Item38 Ethnic Origin] = 1 AND
ISNULL([Item39A White]) AND
ISNULL([Item39B Black]) AND
ISNULL([Item39C Asian]) AND
ISNULL([Item39D American Indian]) AND
ISNULL([Item39G Native Hawaiian])
THEN 'D. Hispanic only'

ELSEIF [Item39F Unknown] = '7' AND
[Item38 Ethnic Origin] <> 1
THEN 'I. Ethnic Origin/Race Unknown'

ELSE 'A. Multi-Racial'
END

```

The calculation is valid. Sheets Affected: [Apply] [OK]

**Functions List:** ABS, ACOS, AND, ASCII, ASIN, ATAN, ATAN2, ATTR, AVG, CASE, CEILING, CHAR, CONTAIN, COS, COT, COUNT, COUNTD, DATE, DATEADD, DATEDIF, DATENAM, DATEPAR, DATEPAR, DATETIME, DATETRU, DAY, DEGREES, DIV, ELSE, ELSEIF, END, ENDSWT, EXCLUDE, EXP, FIND, FINDNTH, FIRST, FIXED, FLOAT, FLOOR

**Bottom Bar:** Data Source | Demographics | Summary Values | Bad Records | Errors | Questionable Records | CBM001 | Count by Ethnicity

Organize your data  
and create  
calculated fields



## CBM001 Student Demographics

### Ethnicity

A. White	24,087
B. Black	1,976
C. Hispanic	10,209
D. Asian	8,802
E. American Indian	96
F. Native Hawaiian	59
G. Multi-Racial	1,576
H. International	3,977
I. Unknown	530
Grand Total	51,312

### Racial Category

A. Multi-Racial	1,876
B. White Only	29,521
C. Black only	2,116
D. Hispanic only	3,955
E. Asian only	8,927
F. American Indian/Alaskan Native only	330
G. International only	3,977
H. Native Hawaiian/Other Pacific Islander only	80
I. Ethnic Origin/Race Unknown	530
Grand Total	51,312

### Age Group

A. Under 17	2
C. 18	6
D. 19-21	12,455
E. 22-24	23,273
F. 25-30	10,215
G. 31-35	3,222
H. 36-50	1,893
I. 51-64	215
J. 65 or older	31
Grand Total	51,312

### Classification

Freshman	7,539
Sophomore	8,225
Junior	9,930
Senior	13,828
Master's	5,352
Doctoral	4,818
Special Professional	1,620
Grand Total	51,312

### Residence

A. Texas Counties	40,784
B. Other States	5,656
C. Foreign Countries	4,872
Grand Total	51,312

### Gender

Male	25,249
Female	26,063
Grand Total	51,312

Average age of student is 25

### Ethnic Origin

A. Hispanic or Latino Origin	10,209
B. Not Hispanic or Latino Origin	32,255
C. Not Answered	8,848
Grand Total	51,312

Create custom counters to use for reports and surveys.



## CBM001 Summary Values

### By Program

A. Teacher Education (Init Cert. UG)	1,050
B. Teacher Education (Init Cert. Mast.)	32
D. Teacher Education (Post-Baccalaureate)	23
E. Nursing (ADN to BSN)	35
G. Nursing (initial RN Lic.- baccalaureate Lvl)	327
H. Nursing (initial RN Lic.- Masters Level)	57
Q. Special Professional-AUD	37
S. Special Professional-Law	1,088
U. Special Professional-PharmD	495
Grand Total	3,144

### SCH

CF: Collegiate State Funded	519,353
CF: Collegiate UG Not State Funded	4,844
CF: Inter-Institutional State Funded	0
CF: Inter-Institutional Not State Funded	0
CF: Developmental State Funded	66
CF: Developmental Not State Funded	0
CF: Vet Med Special Professional	0
CF: Graduate SCH of Seniors	1,606
CF: Subtotal of SCH Values	525,869
CF: SCH On-Campus	643,899
CF: SCH Off-Campus	1,231
CF: Sum On/Off Campus	645,130
CF: Attempted in Doctoral Courses	38,063
CF: Graduate On-Campus SCH	119,188
CF: Graduate Off-Campus SCH	84
CF: Total Graduate On/Off Campus SCH	119,272

### Tuition Status

A. Resident Tuition	38,726
B. Non-Resident Tuition	3,517
C. Tuition Exemption Tx Res (3)	1,667
E. Law (Resident)	723
F. Law (Non-Resident)	114
G. Resident Tuition (HB1403)	710
H. Resident Tuition Pending	183
I. Tuition Wave Non-Res (E)	5,672
Grand Total	51,312

### FTIC High School

A. Texas High School	6,274
B. Out-of-State High School	711
Grand Total	6,985

### First Time Group

A. FTIC	6,986
B. Graduate/Professional	3,068
C. Transfer	2,325
Grand Total	12,379

### Funding Limit

A. Students Affected by 45 Hour UG Limit	881
B. Students Affected by 30 Hour UG Limit	38,280
C. Not Affected by Limit	12,151
Grand Total	51,312

### Location

A. On-Campus	51,198
B. Off-Campus	83
C. Duplicates	31
Grand Total	51,312

Using calculated fields, mimic CB edit report.





## CBM001 Bad Records

### Invalid Nursing Codes

EID	Item5 Classification	Item18 Major CIP	Item28 Last Name	Item29 First Name	
██████	Doctoral	51380500	██████████	JACOB	1
██████	Doctoral	51380800	██████	VICTORIA	1
Grand Total					2

### SCH for UG Degree Program LT 100

EID	Item5 Classification	Item26 SCH UG Degree Program	Item28 Last Name	Item29 First Name	
██████	Senior	95	██████	NICHOLAS	1
██████	Senior	0	██████	TYLER	1
Grand Total					2

### Blank Major CIP

EID	Item28 Last Name	Item29 First Name	Item18 Major CIP	
██████████		EMILY	Null	1
Grand Total				1

Using calculated fields, determine if your data has bad records before submission.

Knowing about bad records in your data will save you HOURS of waiting.



## CBM001 Error Records

### Students in Doctoral Class but not Doctoral Student

EID	Item28 Last Name	Item29 First Name	Item5 Classification	
[REDACTED]		DANIEL	Sophomore	1
		TYLER	Senior	1
Grand Total				2

### Invalid Hazlewood SSNs

EID	Student SSN	Item5 Classification	Item28 Last Name	Item29 First Name	
[REDACTED]		Senior	[REDACTED]	CHRISTIAN	1
		Doctoral		KIRSTEN	1
		Senior		RYAN	1
Grand Total					3

### FTIC Seniors with Blank CEEB Code

EID	Item5 Classification	Item9 Transfer FTIC	Item36 High School Code	Item28 Last Name	Item29 First Name	
[REDACTED]	Senior	1	Null	[REDACTED]	TYLER	1
Grand Total						1

### HB1403 with Unknown Ethnicity

EID	CF: Racial Category	CF: Tuition Status	Item28 Last Name	Item29 First Name	
[REDACTED]	I. Ethnic Origin/Race Unknown	G. Resident Tuition (HB1403)	[REDACTED]	JUAN	1
Grand Total					1

### UG On/Off Campus SCH != UG SCH

EID	Item5 Classification	Item28 Last Name	Item29 First Name	CF: Subtotal of SCH Values	CF: Sum On/Off Campus	Distinct count of Item3 Student ID
[REDACTED]	Junior	[REDACTED]	MELISSA	13.00	23.00	1.00
	Senior		TYLER	0.00	9.00	1.00
Grand Total						2.00



Lastly, you will be able to find any questionable records for which THECB will require justification statements.

### CBM001 Questionable Records

#### Master Students with no Master Class

EID	Item28 Last Name	Item29 First Name	Item5 Classification	
[REDACTED]		COURTNEY	Doctoral	1
Grand Total				1

#### Blank First Name

EID	Item29 First Name	Item28 Last Name	
[REDACTED]		RITIKA	1
[REDACTED]		SHILPA	1
Grand Total			2

#### Doctoral Students with no Doctoral Funding

EID	Item28 Last Name	Item29 First ..	Item5 Clas..	Sum ..	Item1..	Distn..
[REDACTED]		ANN	Doctoral	0.00	0.00	1.00
[REDACTED]		ALEXANDER	Doctoral	0.00	0.00	1.00
[REDACTED]		ANDREW	Doctoral	0.00	0.00	1.00
[REDACTED]		ANDREA	Doctoral	0.00	0.00	1.00
[REDACTED]		ASHLEY	Doctoral	0.00	0.00	1.00
[REDACTED]		ALEXANDER	Doctoral	0.00	0.00	1.00
[REDACTED]		BENJAMIN	Doctoral	0.00	0.00	1.00
[REDACTED]		FRANK	Doctoral	0.00	0.00	1.00
[REDACTED]		BRADLEY	Doctoral	0.00	0.00	1.00
[REDACTED]		BENJAMIN	Doctoral	0.00	0.00	1.00
[REDACTED]		CLIFF	Doctoral	0.00	0.00	1.00
[REDACTED]		CHRISTOPHE	Doctoral	0.00	0.00	1.00
[REDACTED]		COLLEEN	Doctoral	0.00	0.00	1.00
[REDACTED]		EVAN	Doctoral	0.00	0.00	1.00
[REDACTED]		GREG	Doctoral	0.00	0.00	1.00

#### UG Program Hours out of Range

EID	Item5 Cla..	Item28 Last Name	Item29 First Name	Item..	
[REDACTED]	Junior	[REDACTED]	ANNA-DEL	227	1
[REDACTED]	Senior	[REDACTED]	ARIANA	161	1
[REDACTED]	Junior	[REDACTED]	ALENA	161	1
[REDACTED]	Senior	[REDACTED]	ALEXANDER	161	1
[REDACTED]	Junior	[REDACTED]	ALEJANDRO	161	1
[REDACTED]	Junior	[REDACTED]	ANA	161	1
[REDACTED]	Junior	[REDACTED]	ALISTAIR	161	1
[REDACTED]	Senior	[REDACTED]	ANA	161	1
[REDACTED]	Junior	[REDACTED]	ANGELIKI	161	1
[REDACTED]	Junior	[REDACTED]	AMANDA	162	1
[REDACTED]	Junior	[REDACTED]	ANDREW	227	1
[REDACTED]	Junior	[REDACTED]	ANDREE	100	1
[REDACTED]	Senior	[REDACTED]	ALIF	166	1
[REDACTED]	Senior	[REDACTED]	ADAM	161	1

#### Hazlewood for OOS Students

EID	Item28 Last Name	Item29 First Name	Item8 Reside..	
[REDACTED]		AARON	356	1
[REDACTED]		JOSEPHINE	379	1
[REDACTED]		KIRSTEN	500	1
[REDACTED]		LIZA	340	1
Grand Total				4

#### Younger than 14, older than 75

EID	Item28 Last Name	Item29 First Name	CF: Correct DOB	Exact Age	
[REDACTED]		EWYN	4/25/2000	16	1
[REDACTED]		NANCY	10/18/1941	75	1
[REDACTED]		PAUL	5/2/2000	16	1
Grand Total					3

#### Sum of UG Hours > 22

EID	Item28 Last Name	Item29 First Name	Item5 Classification	
[REDACTED]		ANDREW	Senior	23.00
[REDACTED]		ANN	Senior	23.00
[REDACTED]		BLAKE	Senior	30.00
[REDACTED]		DANIELLE	Senior	23.00
[REDACTED]		HELEN	Junior	23.00
[REDACTED]		KARTIK	Junior	23.00
[REDACTED]		LI	Senior	23.00
[REDACTED]		LAKSHMI	Senior	23.00



TEXAS

Since we're talking CB reports,  
what if you could know your SUE  
score ahead of time?

What about a block view of room  
utilization?..

Blending space info and student courses, you can build a utilization report.



Working with IQ, we built a custom data set; it was not easy!



# TEXAS

Using blended data, individual rooms can be viewed.

Pages

Columns: Measure Names

Rows: Room, Day Sort, Class/Day Detail

Filters: Room, SUM(Room SUE Sco.), Building: GOL, Day Name

Marks: Automatic, Color, Size, Text, Detail, Tooltip, SUM(Room SUE Sco.), Measure Values

Measure Values: SUM(Class Count), SUM(Duration Minut...), SUM(Students), SUM(Capacity), AVG(Average Perce...), SUM(Average Utiliza...), SUM(Overlap Hours), SUM(Average Dema...), AGG(POF Score), SUM(Utilization Sco...), SUM(Room SUE Score)

Viewing: GOL

Room	Class/Day Detail	Class Count	Duration Minutes	Students	Capacity	Average Percent Fill	Average Utilization Hours	Overlap Hours	Average Demand Hours	POF Score	Utilization Score	Demand Score	Room SUE Score
1.108	Tuesday 1430 ARC 328W 800	1	180	8	50	28%	3.6	1.8	7.2	8	8	9	25
	Tuesday 1430 ARC 392W 1290	1	180	6	50	28%	3.6	1.8	7.2	8	8	9	25
	Thursday 1430 ARC 328W 800	1	180	8	50	28%	3.6	1.8	7.2	8	8	9	25
	Thursday 1430 ARC 392W 1290	1	180	6	50	28%	3.6	1.8	7.2	8	8	9	25
	<b>Total</b>	<b>2</b>	<b>720</b>	<b>28</b>	<b>50</b>	<b>28%</b>	<b>7.2</b>	<b>7.2</b>	<b>14.4</b>	<b>8</b>	<b>8</b>	<b>9</b>	<b>25</b>
2.110	Tuesday 1300 ARC 350R 897	1	180	5	49	55%	3.6	1.8	7.2	24	8	9	41
	Tuesday 1300 ARC 386K 1120	1	180	22	49	55%	3.6	1.8	7.2	24	8	9	41
	Tuesday 1800 ARC 386M 1143	1	180	26	49	57%	3.6	1.8	7.2	24	8	9	41
	Tuesday 1800 ARI 381R 430	1	180	2	49	57%	3.6	1.8	7.2	24	8	9	41
	Thursday 1800 ARC 386M 1143	1	180	26	49	57%	3.6	1.8	7.2	24	8	9	41
4.120	Thursday 1800 ARI 381R 430	1	180	2	49	57%	3.6	1.8	7.2	24	8	9	41
	<b>Total</b>	<b>3</b>	<b>1,080</b>	<b>83</b>	<b>49</b>	<b>56%</b>	<b>10.8</b>	<b>10.8</b>	<b>21.6</b>	<b>24</b>	<b>8</b>	<b>9</b>	<b>41</b>
	Tuesday 930 ARC 335M 830	1	90	15	25	60%	1.8	0.0	1.8	24	8	9	41
	Thursday 930 ARC 335M 830	1	90	15	25	60%	1.8	0.0	1.8	24	8	9	41
	<b>Total</b>	<b>2</b>	<b>180</b>	<b>30</b>	<b>25</b>	<b>60%</b>	<b>3.6</b>	<b>0.0</b>	<b>3.6</b>	<b>24</b>	<b>8</b>	<b>9</b>	<b>41</b>

Right-clicking on a row allows access to instructor and student information.

SUM(Room SUE Score) 25.00 - 95.00

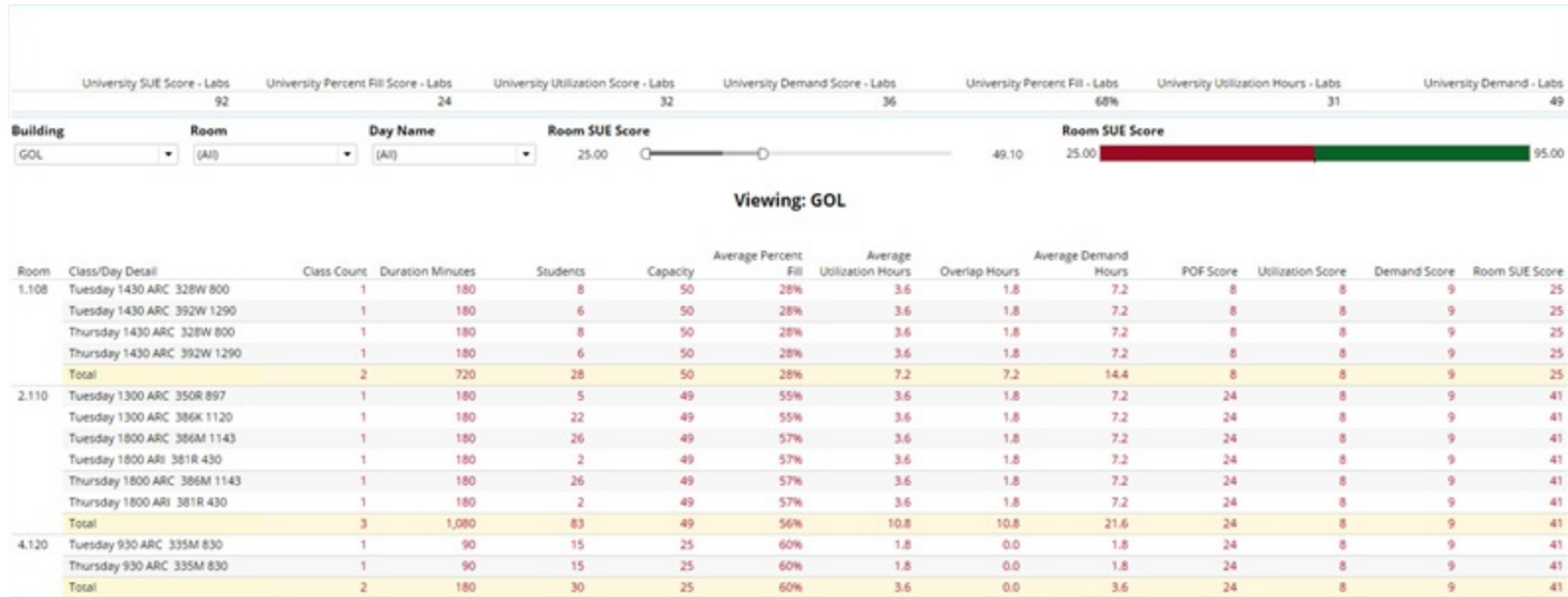
Building: (All), Null, ART, ATT, BAT, BEL, BEN, BIO, BMC, BME, BRB, BTL, BUR

Room: (All), 0.1E1, 0.1E2, 0.1E3, 0.1E4, 0.1E5, 0.151, 0.152, 0.152A, 0.153, 0.154, 0.155, 0.156

Day Name: (All), Null, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday



Create a dashboard with tools for user to customize view.



This dashboard allows the user to see overall university score on top, and ability to adjust view to individual building and/or room.



TEXAS

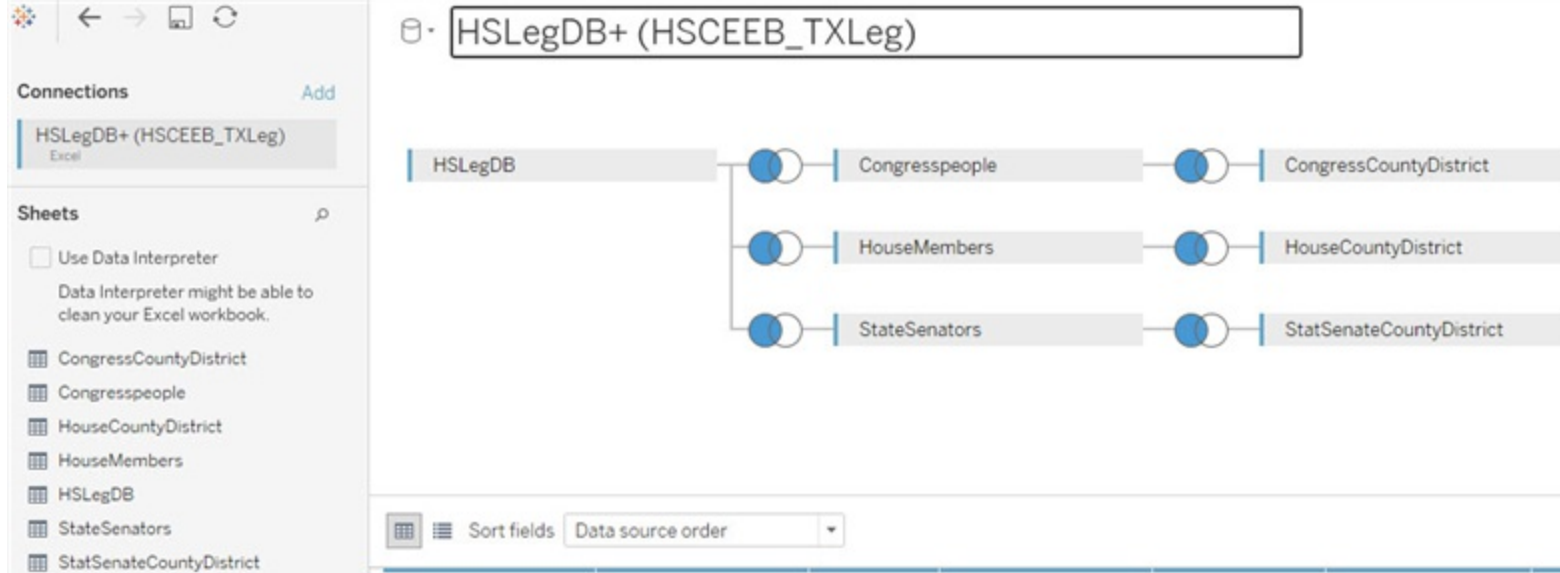
Thank you for your time!

Al Walser - The University of Texas at Austin - [alwalser@austin.utexas.edu](mailto:alwalser@austin.utexas.edu)



## What does your connection look like?

Connections can be made from within an Excel workbook by joining worksheets.



The screenshot displays the 'Connections' pane in Microsoft Excel. At the top, a search box contains the text 'HSLegDB+ (HSCEEB\_TXLeg)'. Below this, the 'Connections' list shows a single entry: 'HSLegDB+ (HSCEEB\_TXLeg)' with 'Excel' as the source. The 'Sheets' section on the left lists several worksheets: 'CongressCountyDistrict', 'Congresspeople', 'HouseCountyDistrict', 'HouseMembers', 'HSLegDB', 'StateSenators', and 'StatSenateCountyDistrict'. The main area of the pane shows a diagram of the data connection. It starts with a box labeled 'HSLegDB'. Three lines branch out from this box to three separate tables: 'Congresspeople', 'HouseMembers', and 'StateSenators'. Each of these tables is then connected to a corresponding table on the right: 'CongressCountyDistrict', 'HouseCountyDistrict', and 'StatSenateCountyDistrict'. At the bottom of the pane, there is a 'Sort fields' dropdown menu set to 'Data source order'.



# TEXAS

**Data** | Analytics | Pages | Columns: House Representati.. | Rows: C12

Dimensions:

- Congresspeople
- HSLegDB
  - CEEB Code
  - NASC City
  - NASC School Name
  - NASC Street
  - NASC Zip
  - NCES Code
  - School County
  - School County Num
  - TEA Campus Number
  - TEA County Name
  - TEA District Name
  - TEA District Num
  - TEA School County
  - TLC-Cong District
  - TLC-TX House Dist
  - TLC-TX SBOE Dist
  - TLC-TX Senate Dist
  - UT School Code
  - Year Added by GML
- HouseMembers

Filters:

- YEAR\_SEMESTER
- House Repres..
- Action (Age G..)
- Action (CF: N..)
- Action (SCHO..)

2 or more (excl. Hisp./Black)	2
Asian only	3
Black only	2
Foreign	1

### Relationships

Relationships determine how data from secondary data sources are joined with primary data sources.

Primary data source: IRRIS\_SH\_StudentDemographics

Secondary data source:  Automatic  Custom

FreshmenApps (FreshmanAppAdmit)	CF: High School CEEB	CEEB Code
HSLegDB+ (HSCEEB_TXLeg)		

Add... Edit... Remove

OK Cancel

You can also connect live data to flat files from within Tableau worksheets. (useful for lookup tables such as Hi..)

12

White only	22,227	43.3%
Hispanic (any combination)	10,265	20.0%
Black only	2,025	3.9%
Black (2 or more, excl. Hisp.)	346	0.7%
Asian only	9,155	17.8%
American Indian only	77	0.2%
Hawaiian/Pac. Islander only	67	0.1%
2 or more (excl. Hisp./Black)	1,337	2.6%
Foreign	5,167	10.1%
Unknown	665	1.3%
Total UT Austin	<b>51,331</b>	

Total and % of Total Number of Records along CF: Semester and Year, C12 broken down by CF: Semester and Year and C12. The data is filtered on YEAR\_SEMESTER, which keeps 20169.