

Wish We Knew Then What We Know Now: Lessons Learned from a Tableau Implementation

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Texas Association for Institutional Research (TAIR)
Corpus Christi, Texas
February 13, 2018

Why a Visual Tool

Enterprise Performance Management System Workspace, Fusion Edit...

Logged in as samoreno | Help | Log Off

UNIVERSITY of HOUSTON

STUDENT ENROLLMENT HEADCOUNT TRENDS

EXPORT to/as...

Semester

All Levels College

Data Warehouse

Student Semester Headcount By Classification

	Fall 2012	Fall 2013	Fall 2014	Fall 2015	Fall 2016
Freshman	5,808	4,539	5,353	5,431	5,441
Sophomore	6,797	6,306	6,234	7,167	7,621
Junior	8,293	8,136	8,522	8,598	
Senior	10,974	11,419	11,613	12,200	
Post-Baccalaureate	1,393	1,306	1,325	1,420	
Masters	4,390	4,197	4,111	4,060	
Doctoral	1,997	2,061	2,179	2,232	
Law	764	732	722	711	
Pharmacy	427	446	459	468	
Optometry	409	398	396	393	
Total	40,747	39,540	40,914	42,704	

UNIVERSITY of HOUSTON

LOGOUT System Student Data Course Data Admissions Data

PHP daily dashboard

Fall Headcount Daily Enrollment Statistics

Total: 43,768 (Fall 2016) vs 45,338 (Fall 2017) with a 3.59% difference.

Dashboard Parameters

Refresh

DATE: DATA TO DISPLAY FILTER DATA BY

Colleges: All C Classification:

SELECT:

Measures: Headcount Semester Credit Hours Course Enrollments

Groups to display: None Student Level Colleges Departments Plan/Major

Gender: Gender Ethnicity

Academic Level: (FR, SO, JR, SR)

All Colleges: Architecture, College of

All Departments:

All Plans:

data tables on line

University of Houston
Trend in Gender by College
Fall 2012 - 2016

		Fall 2012		Fall 2013		Fall 2014		Fall 2015		Fall 2016	
		HC	%								
Arch & Design, Hines College of	Female	285	40.1	275	42.2	309	44.8	327	47.5	345	49.3
	Male	426	59.9	377	57.8	380	55.2	362	52.5	355	50.7
	Subtotal	711	100.0	652	100.0	689	100.0	689	100.0	700	100.0
Arts, College of the	Female	885	56.2	851	56.4	784	55.4	774	54.4	853	55.9
	Male	691	43.8	659	43.6	630	44.6	650	45.6	674	44.1
	Subtotal	1,576	100.0	1,510	100.0	1,414	100.0	1,424	100.0	1,527	100.0
Business, Bauer College of	Female	2,659	44.0	2,633	45.3	2,735	46.0	2,924	47.9	2,990	48.4
	Male	3,380	56.0	3,176	54.7	3,217	54.0	3,181	52.1	3,192	51.6
	Subtotal	6,039	100.0	5,809	100.0	5,952	100.0	6,105	100.0	6,182	100.0
Education, College of	Female	2,188	83.2	2,010	80.8	1,950	80.3	1,949	80.2	2,020	80.1
	Male	441	16.8	477	19.2	477	19.7	482	19.8	502	19.9
	Subtotal	2,629	100.0	2,487	100.0	2,427	100.0	2,431	100.0	2,522	100.0
Engineering, College of	Female	1,068	23.2	992	24.6	1,121	25.0	1,293	25.5	1,225	24.7
	Male	3,534	76.8	3,041	75.4	3,371	75.0	3,778	74.5	3,744	75.3
	Subtotal	4,602	100.0	4,033	100.0	4,492	100.0	5,071	100.0	4,969	100.0

Directive

Spring 2016
Goals for Tool

Fall 2016
RFP posted

January 2017
Tableau
Installed

Direction - ?

- First series of output
- Security & Access
- IR  Data Warehouse Team

Tableau Configuration

- Oracle Database Connections
- Live Connection vs. Extract
- Tableau Data Models
- Data Validation

IR ↔ DW

- Weekly Meetings for Best Practices and Ideas/Suggestions
- White Papers
- Naming Convention
- Business Process

Server Performance

- Server Load Testing
- High CPU Usage

Managing Expectations



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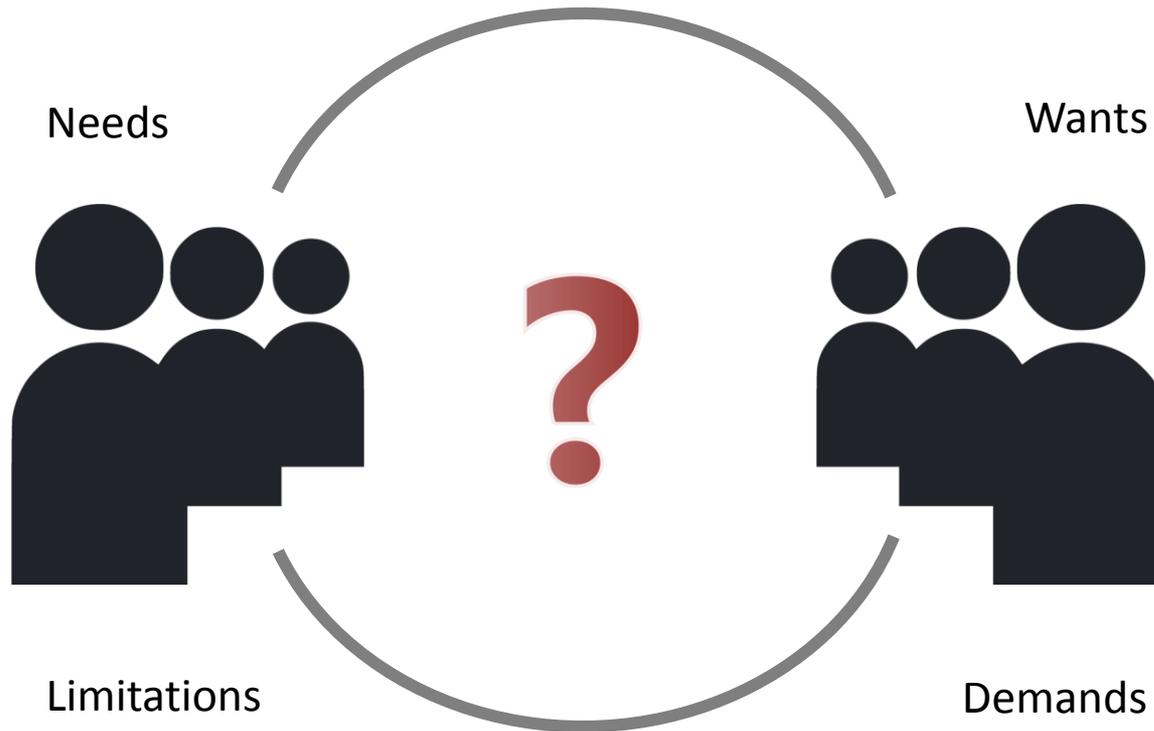


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Excel vs. Data Visualization Tools

Excel	Data Visualization Tools
Primarily static charts	Flexible charts
Dashboards are complicated	Dashboards are drag and drop
Constraints on dataset size and efficiency	Ability to analyze large datasets with speed and ease
Maps? What are maps?	Mapping capability
Without lots of programming, product is static (usually printed)	Explore data in real-time

The Great Balancing Act



Excel Document

As of April 09, 2017
Day 03 of the Fall Enrollment Cycle

New and Continuing Student Enrollment (Session 1 Only)

Headcount Student Level	New				Continuing				Total			
	Fall 2015	Fall 2016	Fall 2017	2015-17 % Diff	Fall 2015	Fall 2016	Fall 2017	2015-17 % Diff	Fall 2015	Fall 2016	Fall 2017	2015-17 % Diff
UGRD - FTIC	0	0	0	#DIV/0!	2,632	3,832	5,120	94.5%	2,632	3,832	5,120	94.5%
UGRD - Transfer	0	0	0	#DIV/0!	550	629	777	41.3%	550	629	777	41.3%
All Undergraduate	0	0	0	#DIV/0!	3,182	4,461	5,897	85.3%	3,182	4,461	5,897	85.3%
Post-Bacc	0	0	3	#DIV/0!	2	2	3	50.0%	2	2	6	200.0%
Masters	18	14	0	-100.0%	703	656	866	23.2%	721	670	866	20.1%
Doctoral	1	0	0	-100.0%	97	54	95	-2.1%	98	54	95	-3.1%
All Graduate	19	14	0	-100.0%	800	710	961	20.1%	819	724	961	17.3%
Law	0	0	0	#DIV/0!	22	24	43	95.5%	22	24	43	95.5%
Optometry	0	0	0	#DIV/0!	0	0	0	#DIV/0!	0	0	0	#DIV/0!
Pharmacy	3	3	0	-100.0%	74	8	72	-2.7%	77	11	72	-6.5%
All Special Prof.	3	3	0	-100.0%	96	32	115	19.8%	99	35	115	16.2%
Total	22	17	3	-86.4%	4,080	5,205	6,976	71.0%	4,102	5,222	6,979	70.1%

SCH Student Level	New				Continuing				Total			
	Fall 2015	Fall 2016	Fall 2017	2015-17 % Diff	Fall 2015	Fall 2016	Fall 2017	2015-17 % Diff	Fall 2015	Fall 2016	Fall 2017	2015-17 % Diff
UGRD - FTIC	0	0	0	#DIV/0!	35,825	53,190	71,261	98.9%	35,825	53,190	71,261	98.9%
UGRD - Transfer	0	0	0	#DIV/0!	6,448	7,238	9,084	40.9%	6,448	7,238	9,084	40.9%
All Undergraduate	0	0	0	#DIV/0!	42,273	60,428	80,345	90.1%	42,273	60,428	80,345	90.1%
Post-Bacc	0	0	0	#DIV/0!	6	6	18	200.0%	6	6	18	200.0%
Masters	161	132	0	-100.0%	6,314	5,450	7,208	14.2%	6,474	5,582	7,208	11.3%
Doctoral	9	0	0	-100.0%	748	394	704	-5.9%	757	394	704	-7.0%
All Graduate	170	132	0	-100.0%	7,062	5,844	7,912	12.0%	7,231	5,976	7,912	9.4%
Law	0	0	0	#DIV/0!	281	329	545	94.0%	281	329	545	94.0%
Optometry	0	0	0	#DIV/0!	0	0	0	#DIV/0!	0	0	0	#DIV/0!
Pharmacy	39	42	0	-100.0%	984	98	1,012	2.8%	1,023	140	1,012	-1.1%
All Special Prof.	39	42	0	-100.0%	1,265	427	1,557	23.1%	1,304	469	1,557	19.4%
Total	209	174	0		50,606	66,705	89,832	77.5%	50,814	66,879	89,832	76.8%

Tableau Version

New and Continuing Student Fall Enrollment (Headcount)

As of May 21, 2017

		New			Continuing			Total		
		2016	2017	% Change	2016	2017	% Change	2016	2017	% Change
Undergraduate	FTIC	281	303	7.8%	9,322	9,904	6.2%	9,603	10,207	6.3%
	Transfer	24	25	4.2%	10,346	11,303	9.2%	10,370	11,328	9.2%
	Total	305	328	7.5%	19,668	21,207	7.8%	19,973	21,535	7.8%
Post-Bacc	Post-Bacc	41	32	-22.0%	647	656	1.4%	688	688	0.0%
	Total	41	32	-22.0%	647	656	1.4%	688	688	0.0%
Graduate	Master's	102	194	90.2%	1,573	1,742	10.7%	1,675	1,936	15.6%
	Doctoral	33	76	130.3%	445	653	46.7%	478	729	52.5%
	Total	135	270	100.0%	2,018	2,395	18.7%	2,153	2,665	23.8%
Special Prof.	Law	13	38	192.3%	469	486	3.6%	482	524	8.7%
	Optometry		5			1			6	
	Pharmacy	117	102	-12.8%	222	234	5.4%	339	336	-0.9%
	Total	130	145	11.5%	691	721	4.3%	821	866	5.5%
Grand Total		611	775	26.8%	23,024	24,979	8.5%	23,635	25,754	9.0%

Select View

Headcount

Select Semester

Fall

Number of Years

Two Years

Select a Week

Most Recent Week

Select a Sunday

5/21/2017

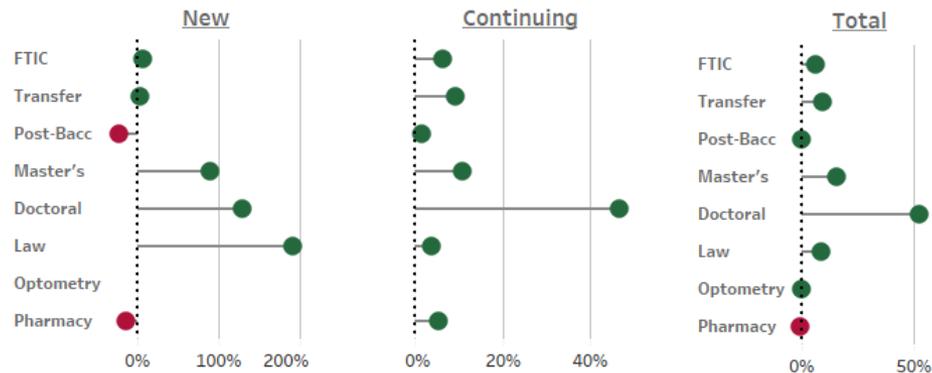
College

(All)

Department

(All)

Overall Percent Change



Semester: Fall
 Alignment: As of May 21, 2017
 College: All
 Department: All

Behind the Scenes

Dashboard Layout ▾

Device Preview

Size

Desktop Browser (1000 x ... ▾)

Sheets

- New
- New Change
- New Change Viz
- Continuing
- Continuing Change
- Continuing Change...
- Total
- Total Change
- Total Change Viz
- As Of
- Filters
- Info

Objects

New and Continuing Student Fall Enrollment (Headcount)

As of May 21, 2017

		New			Continuing			Total		
		2016	2017	% Change	2016	2017	% Change	2016	2017	% Change
Undergraduate	FTIC	281	303	7.8%	9,322	9,904	6.2%	9,603	10,207	6.3%
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Select View

Headcount ▾

Select Semester

Fall ▾

Number of Years

Two Years ▾

Select a Week

Most Recent Week ▾

Select a Sunday

5/21/2017

College

(All) ▾

Department

(All) ▾

Semester: Fall
Alignment: As of May 21, 2017
College: All
Department: All

Overall Percent Change

New

Continuing

Total

Presenting Tableau Dashboards

- Tableau Server versus Tableau Public
- Display dashboards on web pages
 - Content management systems
 - Style guidelines
 - Fitting dashboards to existing pages

UH by the Numbers

Home Enrollment Tracking Enrollment Trends New Student Profile Semester Credit Hours Student Degrees Faculty

UH Home > UH By the Numbers > Enrollment Trends

Enrollment Trends

NOTE: The data contained on this website is available for University of Houston faculty and staff only. A valid CougarNet ID and password is required to log in and view this data. For publicly available institutional data, please visit the Institutional Research website at <http://www.uh.edu/ir/>.

For Internet Explorer 11 users: This site is not supported. Please view using the Firefox or Chrome browsers.

At a Glance Race/Ethnicity Gender Student Level Custom Tables

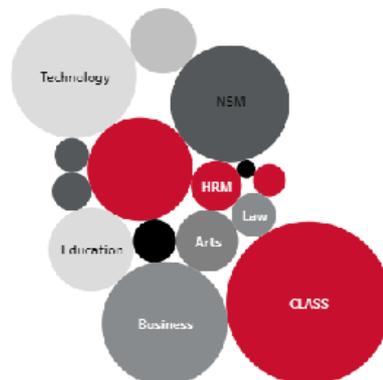
Semester: Fall 2017

Total Enrollment

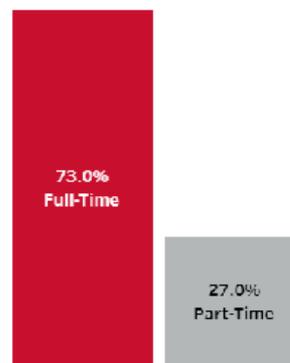
45,364

Undergraduate	36,088
Postbaccalaureate	1,246
Master's	4,174
Doctoral	2,249
Special Prof	1,607

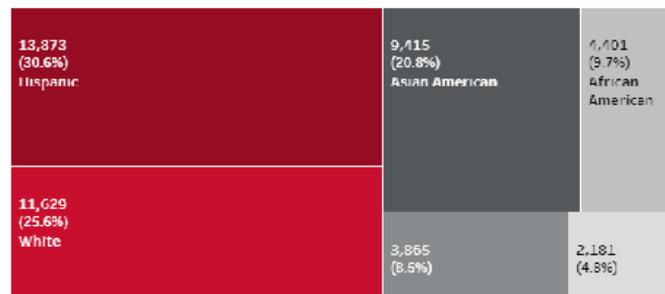
Enrollment by College



Full-Time/Part-Time Status



Race/Ethnicity



Gender



UH by the Numbers

ENROLLMENT TRACKING

- Admissions
- Class Profiles
- Admit and Yield Rates
- New and Continuing Student Enrollment

Admissions

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Student Applicants, Admissions, and Enrollment

As of Jan 28, 2018

		Applicants				Admitted	Admit Rate	Enrolled	Yield Rate	One Year Change			
		Started	Completed	Completion Rate						Started	Completed	Admitted	Enrolled
FTIC	Spring 2017	649	300	46.2%	162	54.0%	99	61.1%					
	Spring 2018	610	256	42.0%	150	58.6%	91	60.7%	-6.0%	-14.7%	-7.4%	-8.1%	
Transfer	Spring 2017	4,546	3,427	75.4%	2,891	84.4%	2,105	72.8%					
	Spring 2018	4,212	3,296	78.3%	2,913	88.4%	1,983	68.1%	-7.3%	-3.8%	0.8%	-5.8%	
Post-Bacc	Spring 2017	547	442	80.8%	419	94.8%	271	64.7%					
	Spring 2018	513	418	81.5%	396	94.7%	239	60.4%	-6.2%	-5.4%	-5.5%	-11.8%	
Readmitted	Spring 2017	997	765	76.7%	499	65.2%	387	77.6%					
	Spring 2018	854	622	72.8%	388	62.4%	303	78.1%	-14.3%	-18.7%	-22.2%	-21.7%	
Master's	Spring 2017	1,192	1,016	85.2%	779	76.7%	590	75.7%					
	Spring 2018	852	708	83.1%	540	76.3%	370	68.5%	-28.5%	-30.3%	-30.7%	-37.3%	
Doctoral	Spring 2017	207	197	95.2%	105	53.3%	92	87.6%					
	Spring 2018	144	120	83.3%	87	72.5%	68	78.2%	-30.4%	-39.1%	-17.1%	-26.1%	
Special Prof.	Spring 2017	23	23	100.0%	23	100.0%	22	95.7%					
	Spring 2018	16	16	100.0%	16	100.0%	14	87.5%	-30.4%	-30.4%	-30.4%	-36.4%	

Select Semester
Spring

Select a Week
Most Recent Week

Select a Sunday
11/5/2017

Start Year
2017

End Year
2018

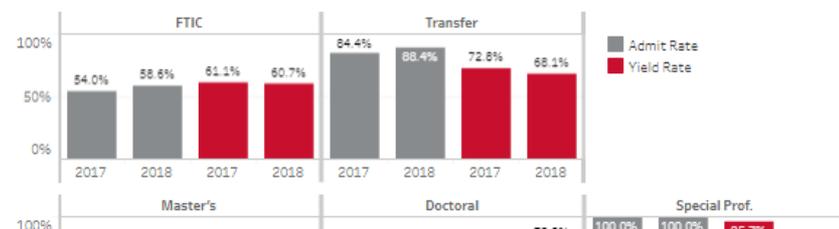
College
(All)

Department
(All)



Semester: Spring
Date: As of Jan 28, 2018
College: All
Department: All

Admit and Yield Rates



Troubleshooting

- Where things may go wrong
 - Desktop
 - Server
 - Website
- Resources
 - IT team
 - Tableau/Consultant
 - Google
 - Communications/Marketing
 - You

Q&A

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