

# **Student Enrollment by Location: Visualizing CBM Student and Class Report**

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Texas Association of Institutional Research (TAIR)

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# Outline

- What's the question?
- Historical Context
- Early data – Pre-Data Warehouse (DW)
- The Dashboard
- Demonstration
- Questions

# University of Houston

- 47,031 students
- 16 colleges
- 114 bachelors, 111 masters, 47 doctoral, and 4 professional programs
- 11,522 degrees awarded annually



# What's the question?

How many UH students are at XX  
location?

# Historical Context

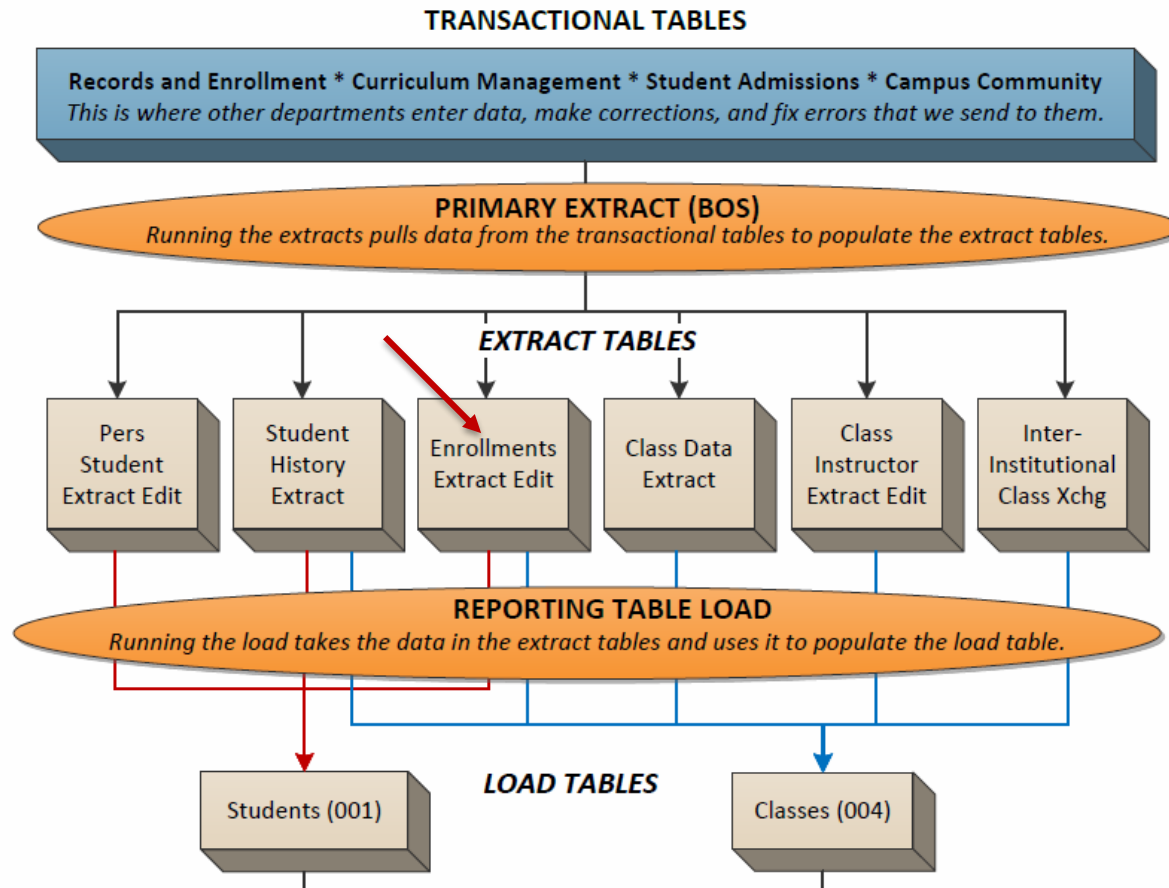
- Expectation that number matched our certified student headcount.
- IR was only office that could get to the data
- Once produced data was not accessible

# Historical Context

- Issues to consider:
  - How to identify locations in the data
  - Multiple rows per student, class enrollments
  - Students may have a class in multiple locations
  - How to narrow data to equal student count
  - What to do with online classes

# Early Location Data

## CBM001/CBM004 REPORTING FLOW CHART



# Early Location Data

	Fall 2017		Spring 2018		Summer 2018	
	Unduplicated	Duplicated	Unduplicated	Duplicated	Unduplicated	Duplicated
Katy	8	20	7	20		
Northwest	0	23	3	22		46
On-Campus	27,468	43,044	23,944	40,151	7,926	17,112
Other Location		4			27	88
On-line	1,537	16,545	1,496	17,271	4,812	12,469
Rice University	0	21		15		
San Antonio	30	48	17	46		
Sugar Land	373	2,282	353	1,995	272	1,118
Multiple Locations	15,948		16,540		3,339	
<b>Total</b>	<b>45,364</b>		<b>42,360</b>		<b>16,376</b>	



# Historical Context cont'd

- In 2012, but really 2015, UH System Sugar Land location became UH Sugar Land
  - Need for accessible data
  - “Quick” solution - Create a location view table in PeopleSoft Campus Solutions.

Records	Query	Expressions	Prompts	Fields	Criteria	Having	Transformations	View SQL	Run
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[View All](#) | [Rerun Query](#) | [Download to Excel](#) | [Download to XML](#)

First 1-100 of 43563 Last

Row	Term	Main Campus Loc	Sugar Land Loc	UHS-Katy	Northwest Loc	San Antonio	Other Off Cmpus	Online Only	No Online Class
1	2160	Y	N	N	N	N	N	N	Y
2	2160	Y	N	N	N	N	N	N	Y
3	2160	Y	N	N	N	N	N	N	N
4	2160	Y	N	N	N	N	N	Y	N
5	2160	Y	N	N	N	N	N	Y	N
6	2160	Y	N	N	N	N	N	N	Y
7	2160	Y	N	N	N	N	N	N	Y
8	2160	Y	N	N	N	N	N	Y	N
9	2160	Y	N	N	N	N	N	Y	N
10	2160	Y	N	N	N	N	N	Y	N
11	2160	Y	N	N	N	N	N	N	Y
12	2160	Y	N	N	N	N	N	N	Y
13	2160	Y	N	N	N	N	N	N	Y
14	2160	Y	N	N	N	N	N	Y	N
15	2160	Y	N	N	N	N	N	Y	N
16	2160	Y	N	N	N	N	N	N	N
17	2160	Y	N	N	N	N	N	Y	N
18	2160	Y	N	N	N	N	N	N	Y
19	2160	Y	N	N	N	N	N	N	Y
20	2160	Y	N	N	N	N	Y	N	Y
21	2160	Y	N	N	N	N	N	N	N
22	2160	Y	N	N	N	N	N	Y	N
23	2160	Y	N	N	N	N	N	N	Y
24	2160	Y	N	N	N	N	N	N	Y
25	2160	Y	N	N	N	N	Y	N	Y

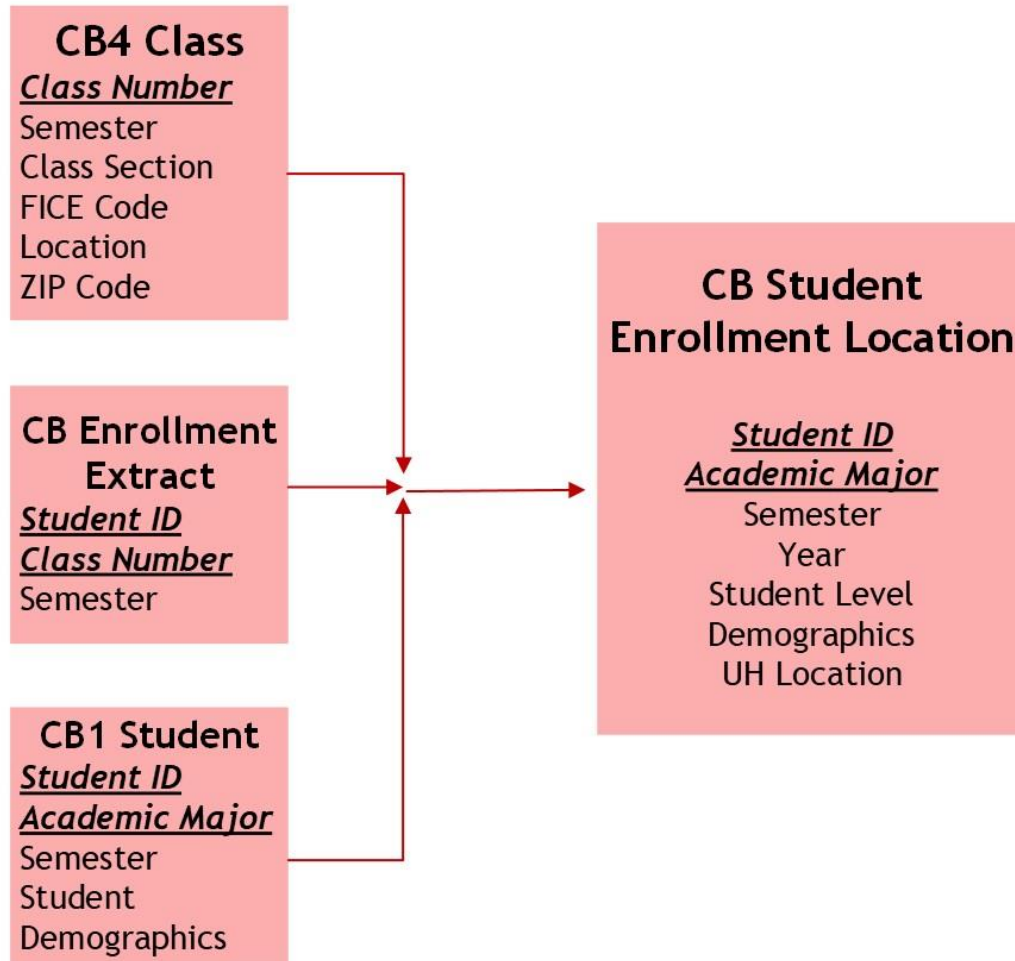
# UH Location Dashboard

- Easily accessible historical trends
- One source of data
- Allows for longitudinal analysis

# Data Decisions

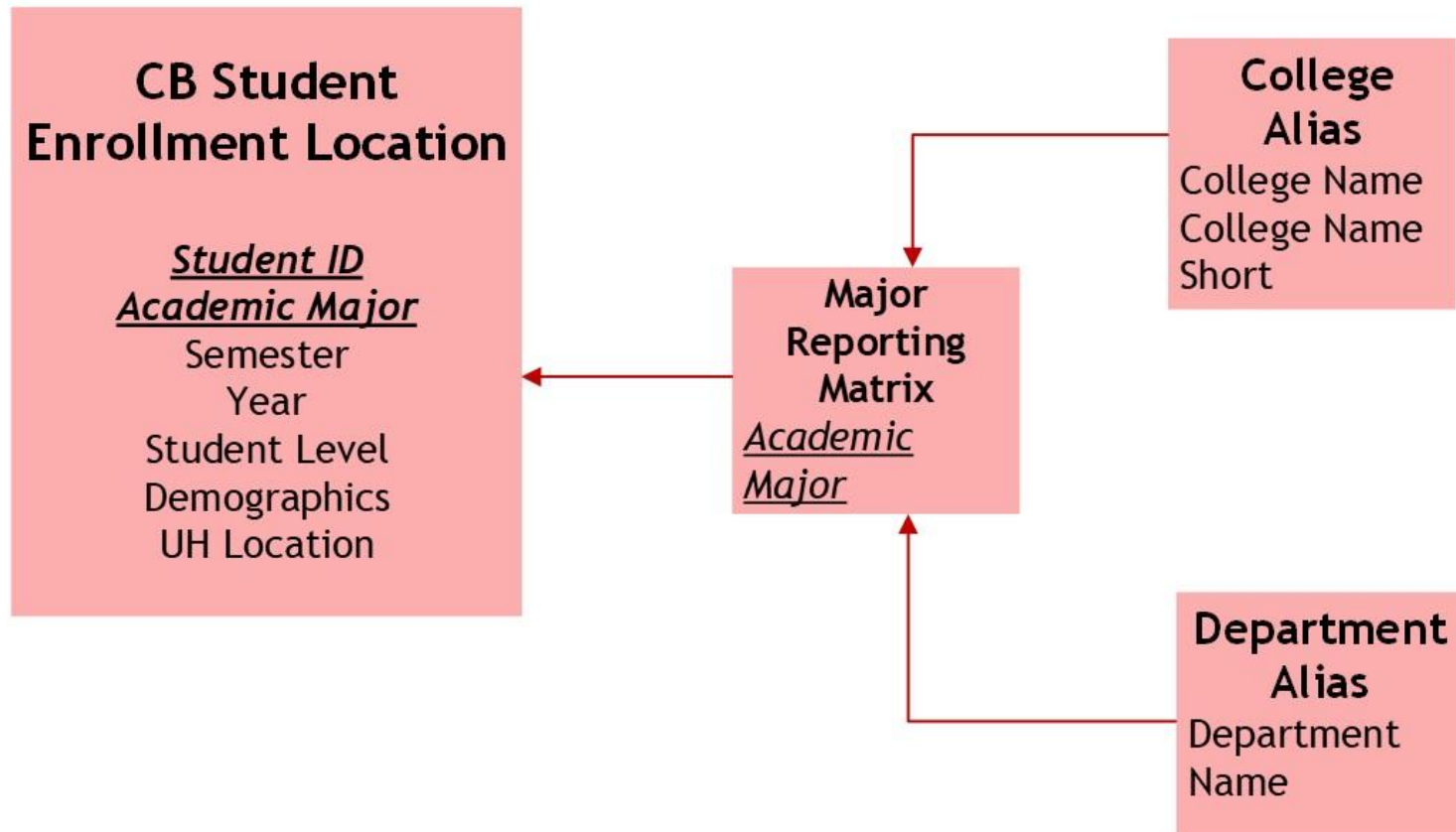
- Use the CB tables already in our Data Warehouse
  - Pull in the enrollment extract table into DW
  - Choose the model
  - Needed to be easy to maintain
  - Changing IDs for locations (Cinco Ranch- Katy, CyFair- Northwest)
- New table created – CB Enrollment Location Table

# Data Model



*CB Student Enrollment Location table: One row for each student for each location where a student has a class*

# Data Model for Tableau Extract



# Data Validation

- Differences in numbers between the DW and early location data
  - Students with 0 SCH reported in CB1 not included in CB4
    - e.g., Extension students, Study Abroad
    - These students were included in ‘other’ location
  - Changes in the way we identified location over time
    - e.g., Katy – previously Cinco Ranch, HCC Katy- interim and final location at UH Katy.

# Data Visualization

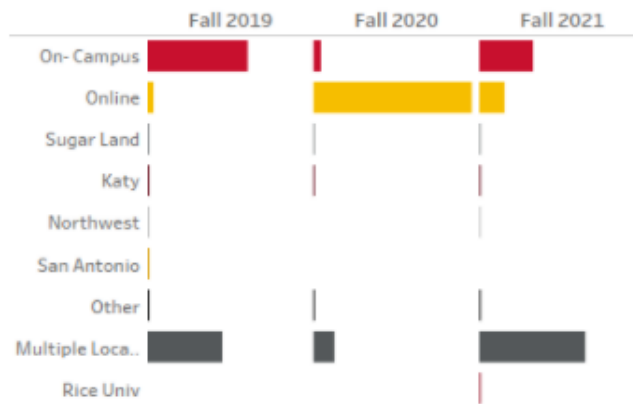
- Purpose: Show variation by locations
- Key Considerations
  - Address multiple locations for each student in Tableau
  - Address scaling for large differences in #s by location
  - Solar system chart (variation by college)



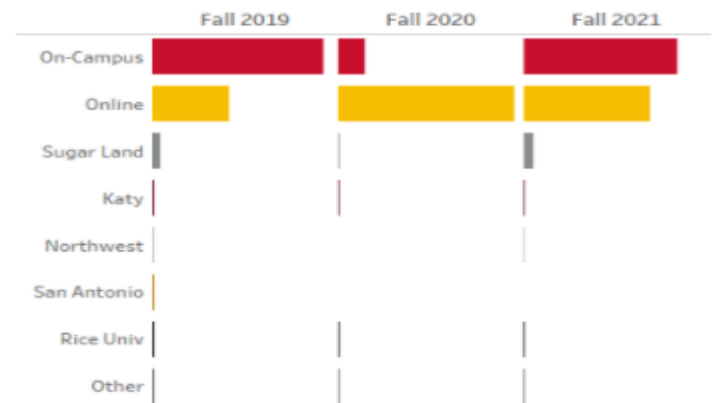
# Data Visualization

- Key Considerations (Cont'd)
  - Clear and precise Labeling
    - Unduplicated vs. duplicated count  
where students take classes vs. have class enrollments
  - Visual aesthetics, UH color palette

Headcount of where students take classes



Locations where students have class enrollments



# Demonstration

# UH by the Numbers



## OVERVIEW

Welcome to **By the Numbers**, the University of Houston's source for comprehensive data about university characteristics, operations, and productivity. This dashboard is designed to support strategic, evidence-based decisions related to the activities below.

**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.

**Enrollment Tracking**  
Weekly reports on admissions and the enrollment of new and continuing students for upcoming academic terms compared to past years.

**Student Data**  
Trend data on student enrollment, semester credit hours, new student profiles, financial aid and locations.

**Student Success**  
Student performance trend data including degrees awarded, retention and graduation rates, and semester credit hour completion.

## UH by the Numbers

# Future

- On-going data improvements
- Adding SCH based view for UH locations





Thank you!!

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# Appendix



# UH by the Numbers

Home Enrollment Tracking Student Data Student Success Faculty External Data Advancement

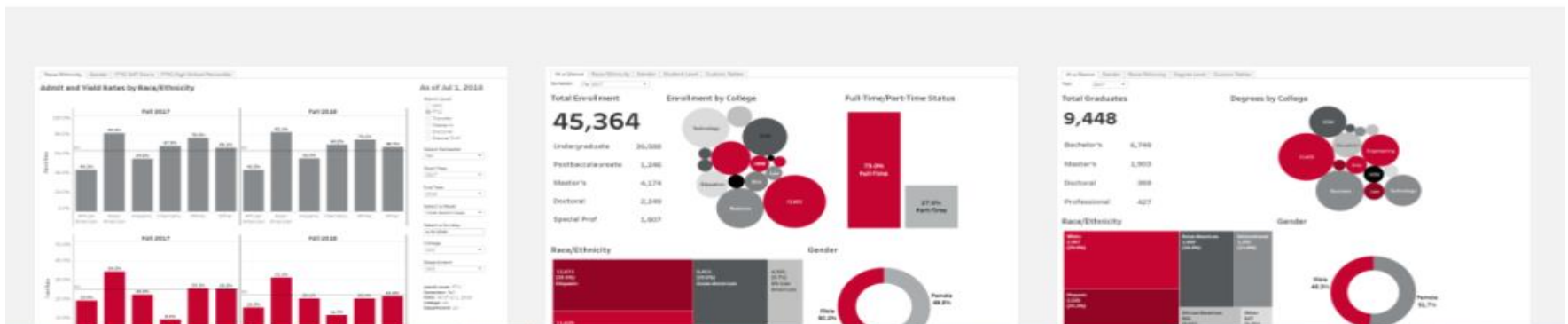
## UH BY THE NUMBERS

### OVERVIEW

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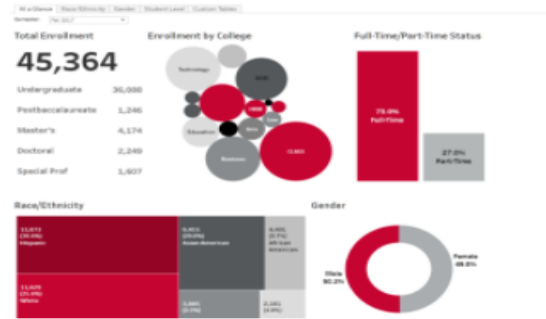




# Student Data

- Student Data**
- Enrollment Trends
- Semester Credit Hours
- New Student Profile
- Financial Aid
- UH Locations

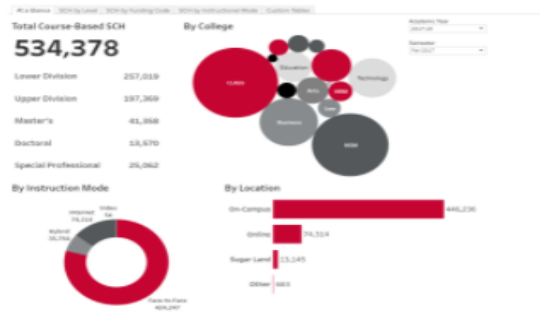
Trend data on student enrollment, semester credit hours, new student profiles, financial aid and locations.



## Enrollment Trends

Trends in enrollment by student characteristics.

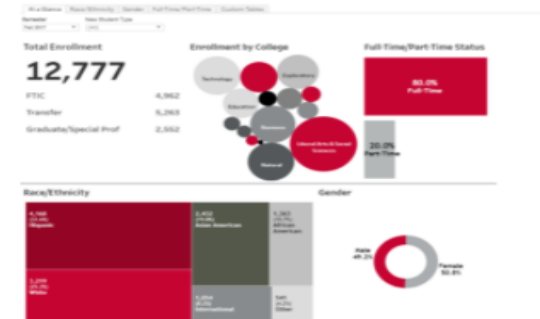
[View Data](#)



## Semester Credit Hours

Trends in student credit hours by semester.

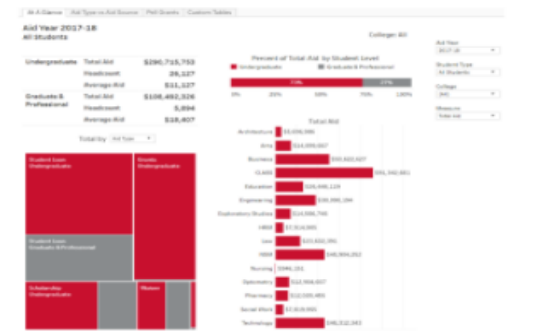
[View Data](#)



## New Student Profile

Characteristics of students enrolled at UH for the first time as undergraduate or graduate/professional students.

[View Data](#)



## Financial Aid

Financial aid awarded to students by aid type, aid source, and student type.

[View Data](#)



## UH Locations

Provides data about which UH locations students enroll in classes.

[View Data](#)

UH Location

Sign in

https://tableau.es.uh.edu

Username

Password

[Sign in](#) [Cancel](#)

[New Student Profile](#) [Financial Aid](#) [UH Locations](#)

### Total Headcount

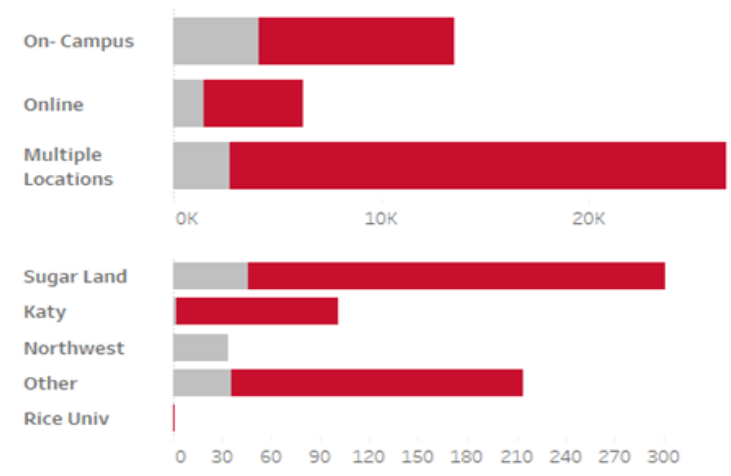
Semester  
Fall 2021

# 47,031

On- Campus	13,540
Online	6,224
Sugar Land	301
Katy	101
Northwest	34
Multiple Locations	26,616
Rice Univ	1
Other	214

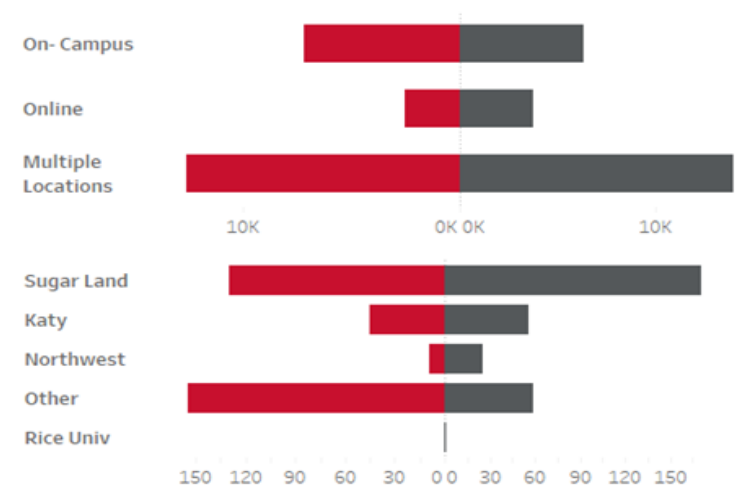
### Student Level

Graduate Undergraduate

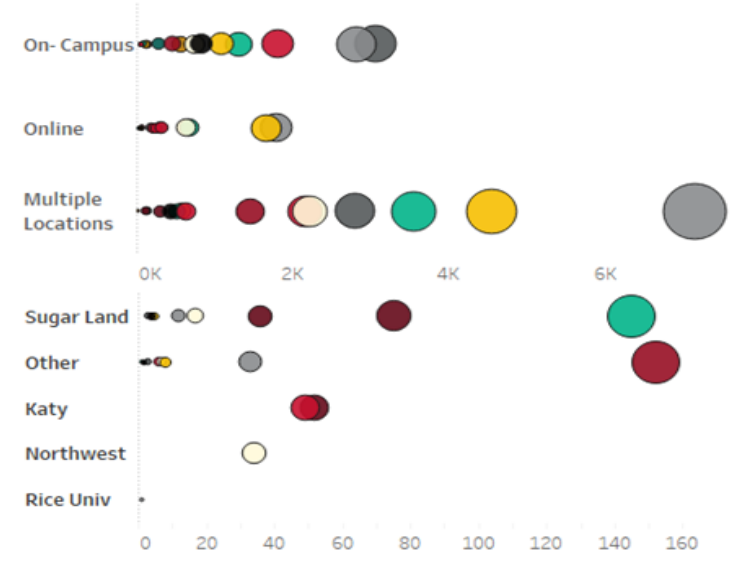


### Gender

Male Female

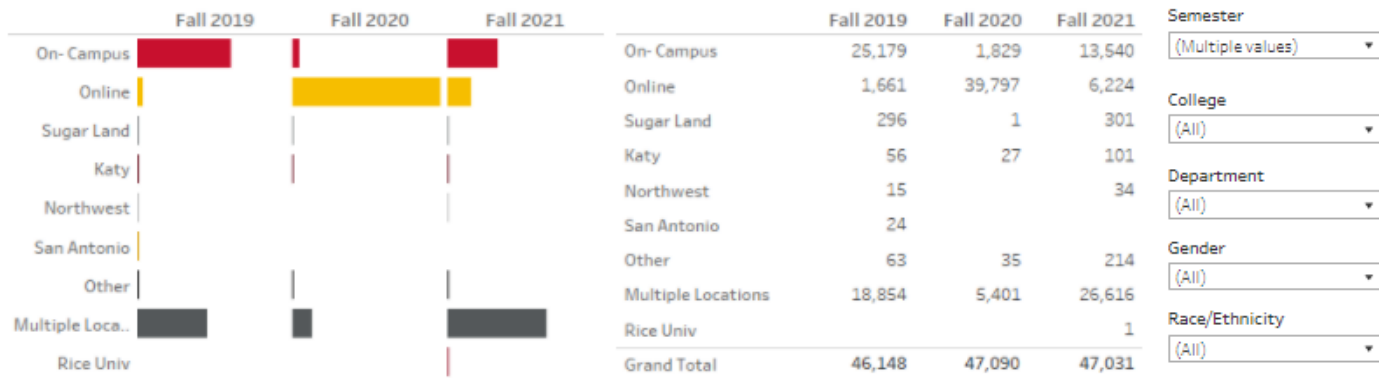


### Colleges



## Headcount and Enrollment by UH Location

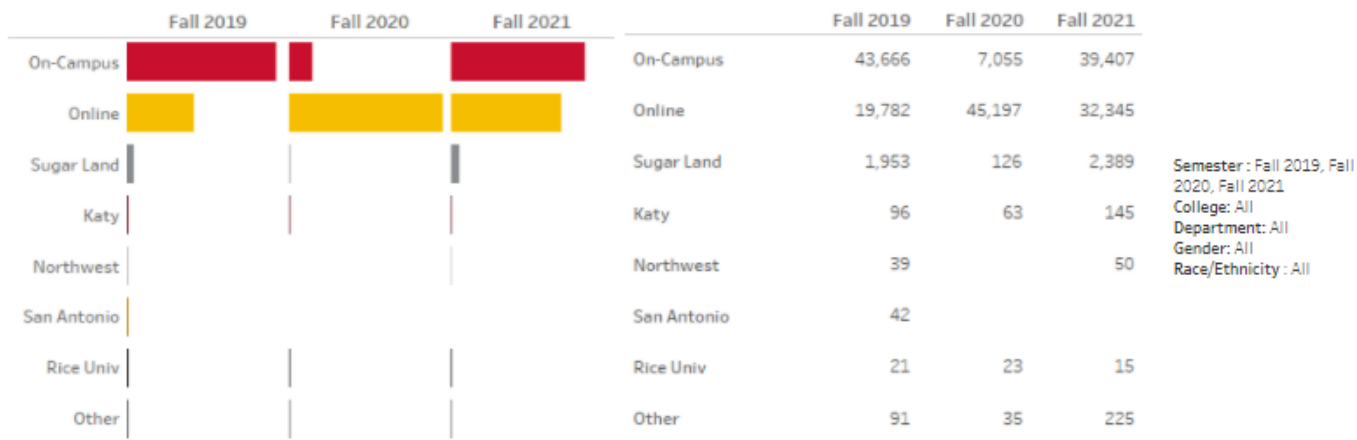
### Headcount of where students take classes



**Note:** A student is enrolled exclusively in face-to-face classes at one physical location. A student is not taking a class at any other location or online. Counts for online indicate that all of the student's classes are exclusively online. If a student takes classes in more than one location, then the student is counted in the "Multiple Locations" category.

■ On-Campus 
 ■ Online 
 ■ Sugar Land 
 ■ Katy 
 ■ Northwest 
 ■ San Antonio 
 ■ Other 
 ■ Multiple Loc...

### Locations where students have class enrollments



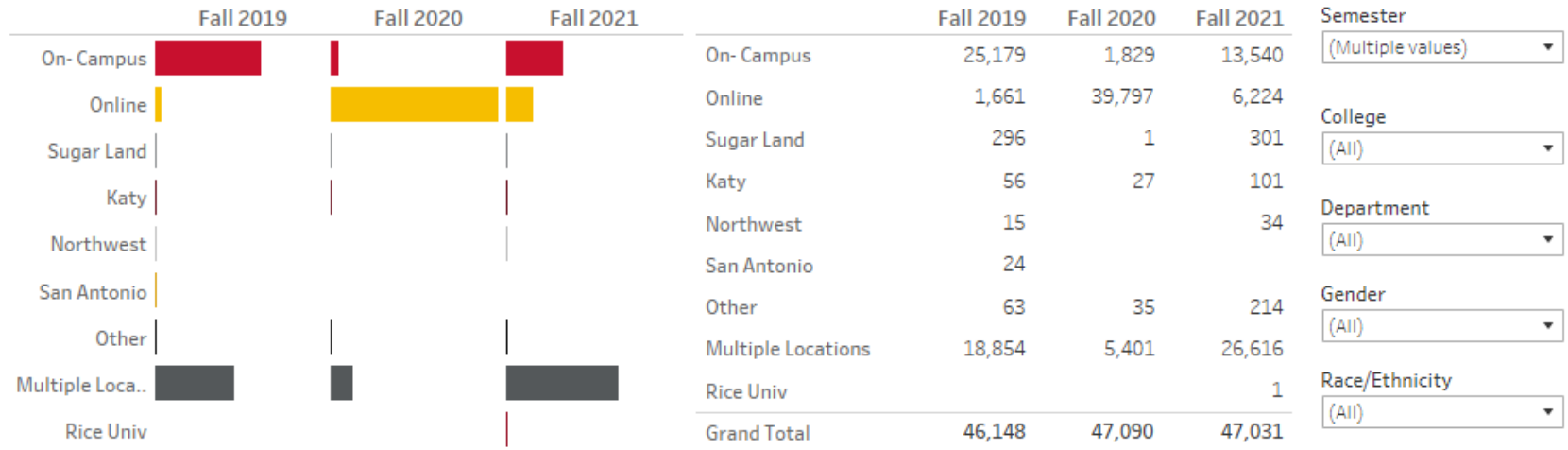
**Note:** A student is counted once for each location that a student has at least one class. For example, if a student is taking classes Online and at Sugar Land, then the student is counted once for "Online" and once for "Sugar Land".

# Locations where students take classes – Unique Headcount

At a Glance | **Headcount and Class Locations** | College and Location | Level and Location | Custom Table

## Headcount and Enrollment by UH Location

### Headcount of where students take classes



























**Note:** A student is enrolled exclusively in face-to-face classes at one physical location. A student is not taking a class at any other location or online. Counts for online indicate that all of the student's classes are exclusively online. If a student takes classes in more than one location, then the student is counted in the "Multiple Locations" category.

■ On- Campus 
 ■ Online 
 ■ Sugar Land 
 ■ Katy 
 ■ Northwest 
 ■ San Antonio 
 ■ Other 
 ■ Multiple Loc... 
 ◀ ▶

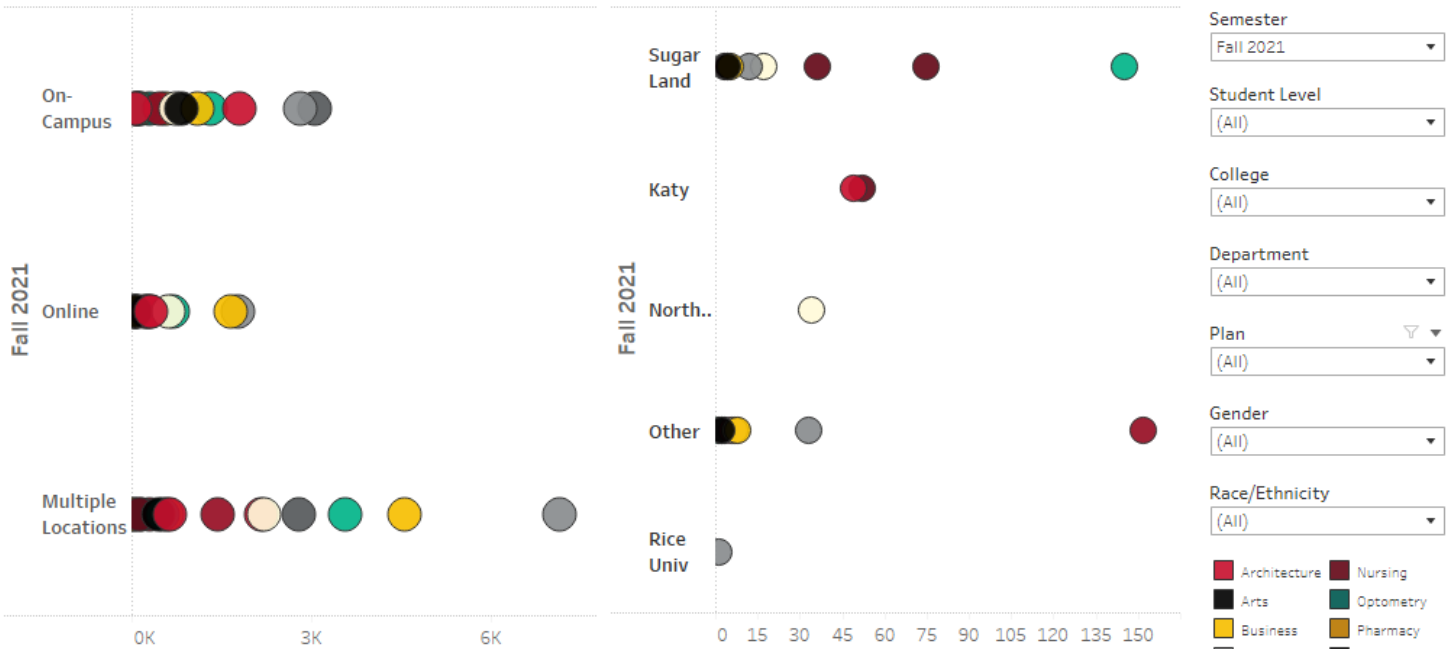
# Locations where students have class enrollments – Duplicated Headcount

## Locations where students have class enrollments

	Fall 2019	Fall 2020	Fall 2021		Fall 2019	Fall 2020	Fall 2021	
On-Campus				On-Campus	43,666	7,055	39,407	Semester: Fall 2019, Fall 2020, Fall 2021 College: All Department: All Gender: All Race/Ethnicity: All
Online				Online	19,782	45,197	32,345	
Sugar Land				Sugar Land	1,953	126	2,389	
Katy				Katy	96	63	145	
Northwest				Northwest	39		50	
San Antonio				San Antonio	42			
Rice Univ				Rice Univ	21	23	15	
Other				Other	91	35	225	

**Note:** A student is counted once for each location that a student has at least one class. For example, if a student is taking classes Online and at Sugar Land, then the student is counted once for "Online" and once for "Sugar Land".

### Headcount by UH Location and College



#### Total Headcount by Location and College

Hover over UH Location header and click on [+] to expand to college and department

UH LOCATION	Fall 2021	
	Headcount	%
On- Campus	13,540	28.8%
Online	6,224	13.2%
Sugar Land	301	0.6%
Katy	101	0.2%
Northwest	34	0.1%
Other	214	0.5%
Multiple Locations	26,616	56.6%
Rice Univ	1	0.0%

Semester:

Student Level:

College:

Department:

Plan:

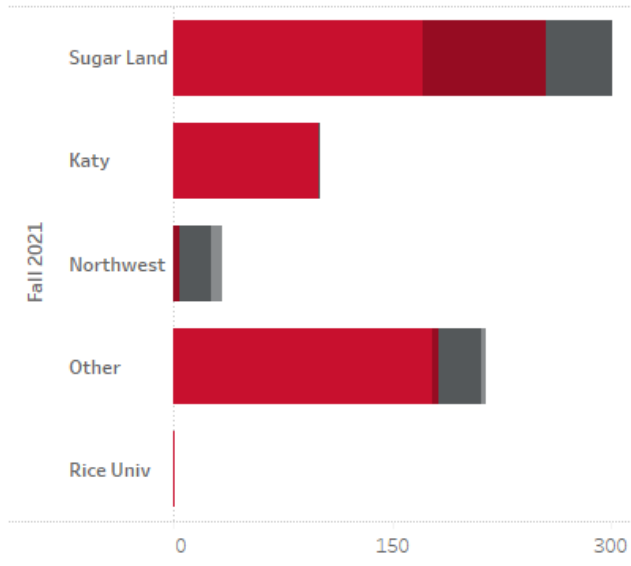
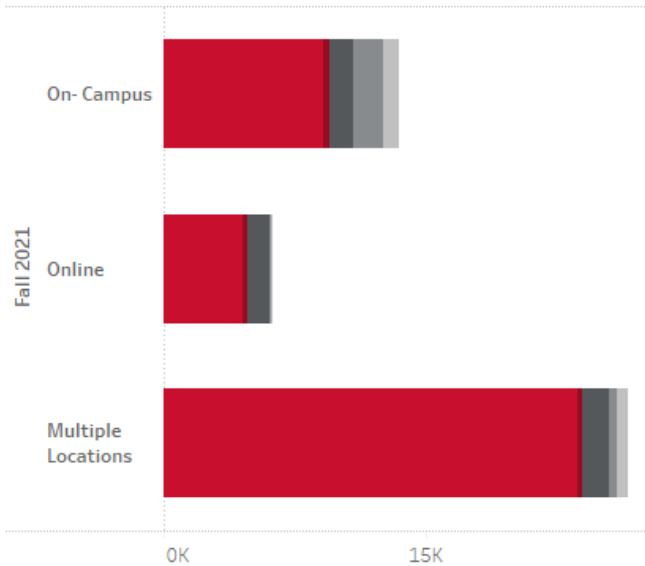
Gender:

Race/Ethnicity:

- Architecture
- Arts
- Business
- CLASS
- Education
- Engineering
- Explorer...
- HRM
- Law
- Medicine
- NSM
- Nursing
- Optometry
- Pharmacy
- Public Aff...
- Social Work
- Technology

Semester: Fall 2021  
 Student Level: All  
 College: All  
 Department: All  
 Plan: All  
 Gender: All  
 Race/Ethnicity: All

## Headcount by Level and UH Location



Semester  
Fall 2021

Student Level  
(All)

College  
(All)

Department  
(All)

Gender  
(All)

Race/Ethnicity  
(All)

- Undergraduate
- Postbaccalaureate
- Master
- Doctoral
- Special Professional

Semester: Fall 2021  
College: All  
Department: All  
Gender: All  
Race/Ethnicity: All

		Fall 2021	
		Headcount	%
On-Campus	Undergraduate	9,105	67.4%
	Postbaccalaureate	354	2.6%
	Master	1,389	10.3%
	Doctoral	1,729	12.8%
	Special Professional	932	6.9%
	<b>Total</b>	<b>13,509</b>	<b>100.0%</b>
Online	Undergraduate	4,559	73.5%
	Postbaccalaureate	201	3.2%
	Master	1,284	20.7%
	Doctoral	110	1.8%
	Special Professional	52	0.8%
	<b>Total</b>	<b>6,206</b>	<b>100.0%</b>
Sugar Land	Undergraduate	171	56.8%
	Postbaccalaureate	84	27.9%
	Master	46	15.3%
	<b>Total</b>	<b>301</b>	<b>100.0%</b>



## Create a Custom Table

Select a dimension to build your custom table:

Dimension 1: UH Location  
 Dimension 2: Blank  
 Dimension 3: Blank

- UH Location
- College
- Department
- Plan
- Student Level
- Student Classification
- Race/Ethnicity
- Gender
- Residency Status
- UH in 4
- Honors Student
- First Generation

Dimension 2	Dimension 3	Fall 2019		Fall 2020		Fall 2021	
		Headcou..	%	Headcou..	%	Headcou..	%
		25,179	100.0%	1,829	100.0%	13,540	100.0%
	<i>Total</i>	25,179	100.0%	1,829	100.0%	13,540	100.0%
<i>Total</i>		25,179	100.0%	1,829	100.0%	13,540	100.0%
		1,661	100.0%	39,797	100.0%	6,224	100.0%
	<i>Total</i>	1,661	100.0%	39,797	100.0%	6,224	100.0%
<i>Total</i>		1,661	100.0%	39,797	100.0%	6,224	100.0%
		296	100.0%	1	100.0%	301	100.0%
	<i>Total</i>	296	100.0%	1	100.0%	301	100.0%
<i>Total</i>		296	100.0%	1	100.0%	301	100.0%
		56	100.0%	27	100.0%	101	100.0%
	<i>Total</i>	56	100.0%	27	100.0%	101	100.0%
<i>Total</i>		56	100.0%	27	100.0%	101	100.0%
Northwest		15	100.0%			34	100.0%
	<i>Total</i>	15	100.0%			34	100.0%
<i>Total</i>		15	100.0%			34	100.0%
Multiple Locations		18,854	100.0%	5,401	100.0%	26,616	100.0%
	<i>Total</i>	18,854	100.0%	5,401	100.0%	26,616	100.0%
<i>Total</i>		18,854	100.0%	5,401	100.0%	26,616	100.0%
Other		63	100.0%	35	100.0%	214	100.0%
	<i>Total</i>	63	100.0%	35	100.0%	214	100.0%
<i>Total</i>		63	100.0%	35	100.0%	214	100.0%
San Antonio		24	100.0%				
	<i>Total</i>	24	100.0%				
<i>Total</i>		24	100.0%				
Rice Univ						1	100.0%
	<i>Total</i>					1	100.0%
<i>Total</i>						1	100.0%
<b>Grand Total</b>		46,148	100.0%	47,090	100.0%	47,031	100.0%

Semester: (Multiple values)

UH Location: (All)

College: (All)

Department: (All)

Plan: (All)

Gender: (All)

Race/Ethnicity: (All)

Semester: Fall 2019, Fall 2020, Fall 2021  
 UH Location: All  
 Student Level: All  
 College: All  
 Department: All  
 Plan: All  
 Gender: All  
 Race/Ethnicity: All



Thank you!!

Dr. Susan Moreno <[semoreno@uh.edu](mailto:semoreno@uh.edu)>

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