

# Graduate Student Time to Degree: An Understudied Population

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# Outline

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About UH

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What's the question?

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Background

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Data Model

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Dashboard demonstration

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Next steps/future direction

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Q&A

# University of Houston

- 46,700 students
- 16 colleges
- Bachelors, masters, doctoral, and professional programs
- 10,699 degrees awarded: 1,862 masters, 406 doctoral, 414 professional



# What's the question?

What is the average time-to-degree  
for graduate students at UH?

# Background

- Timely completion is a measure of student success
- 18 characteristics of Texas doctoral programs.
- Began calculating masters' programs

# Background

- Issues:
  - Once produced data was not easily accessible
  - No demographic details
  - College and Department level averages

# Early Time to Degree Report

3 year Average - Time To Degree - FY18-20								
College	Department	Plan	FY 2018		FY 2019		FY 2020	
			N	Mean	N	Mean	N	Mean
Arts, McGovern College of	Music, Moores School of	Music, DMA	11	5.2	9	6.0	8	7.0
Business, Bauer College of	Business, Bauer (INTERDEPT)	Bus Admn, PHD	12	5.5	23	6.0	7	5.8
Education, College of	Curriculum & Instruction, Dept of	Curr & Instruct, EDD	10	7.3	3	10.4	4	9.4
		Curr & Instruct, PHD	5	5.2	4	5.7	6	4.0
	Educ Ldrshp & Cultural St, Dpt	Higher Educ Leadrshp & Pol,PHD	2	3.2	4	3.1	7	3.2
		Professional Leadership, EDD	37	4.9	18	4.2	49	3.0
	Educational Psychology, Dept	Counseling Psych, PHD	9	7.6	1	6.0	4	5.8
		Educ Psych & Indiv Dif, PHD			1	5.7	2	7.2
		Measure Quant & Learn Sci, PHD	2	8.0	3	5.2	2	6.0
		School Psychology, PHD	5	6.4	3	5.7	2	6.7
Engineering,	Chem& Biomolecular Eng, Dpt of	Biomedical Engineering, PHD	5	3.9	11	4.9	13	5.4
		Chem Engr, PHD	17	4.9	15	5.2	14	4.7
	Civil & Env Engineering, Dept	Civil Engineering, PHD	7	5.0	7	5.0	5	4.5
		Geosensing Syst Engr & Sci,PHD	1.0	4.3	12	4.4	1.0	4.3
	Electr & Comp Engineering, Dpt	Electrical Engr, PHD	22	5.7	14	4.1	24	5.1
		Engr-Environmental, PHD	6	5.6	3	4.9	1	5.7
	Industrial Engineering, Dept	Industrial Engr, PHD	2	4.3	4	4.8	6	5.1
	Mechanical Engineering, Dept	Materials Science & Engr,	13.0	5.2	2	4.8	5.0	5.7
Mechanical Engr, PHD		10	4.2	9	5.1	11	5.2	
Petroleum Engineering, Dept	Petroleum Engineering, PHD	1	2.0	7	4.2	6	5.0	

# Time to Degree

Time, in years, from initial enrollment as a graduate student to degree attainment.

Main issue

Determining first semester.



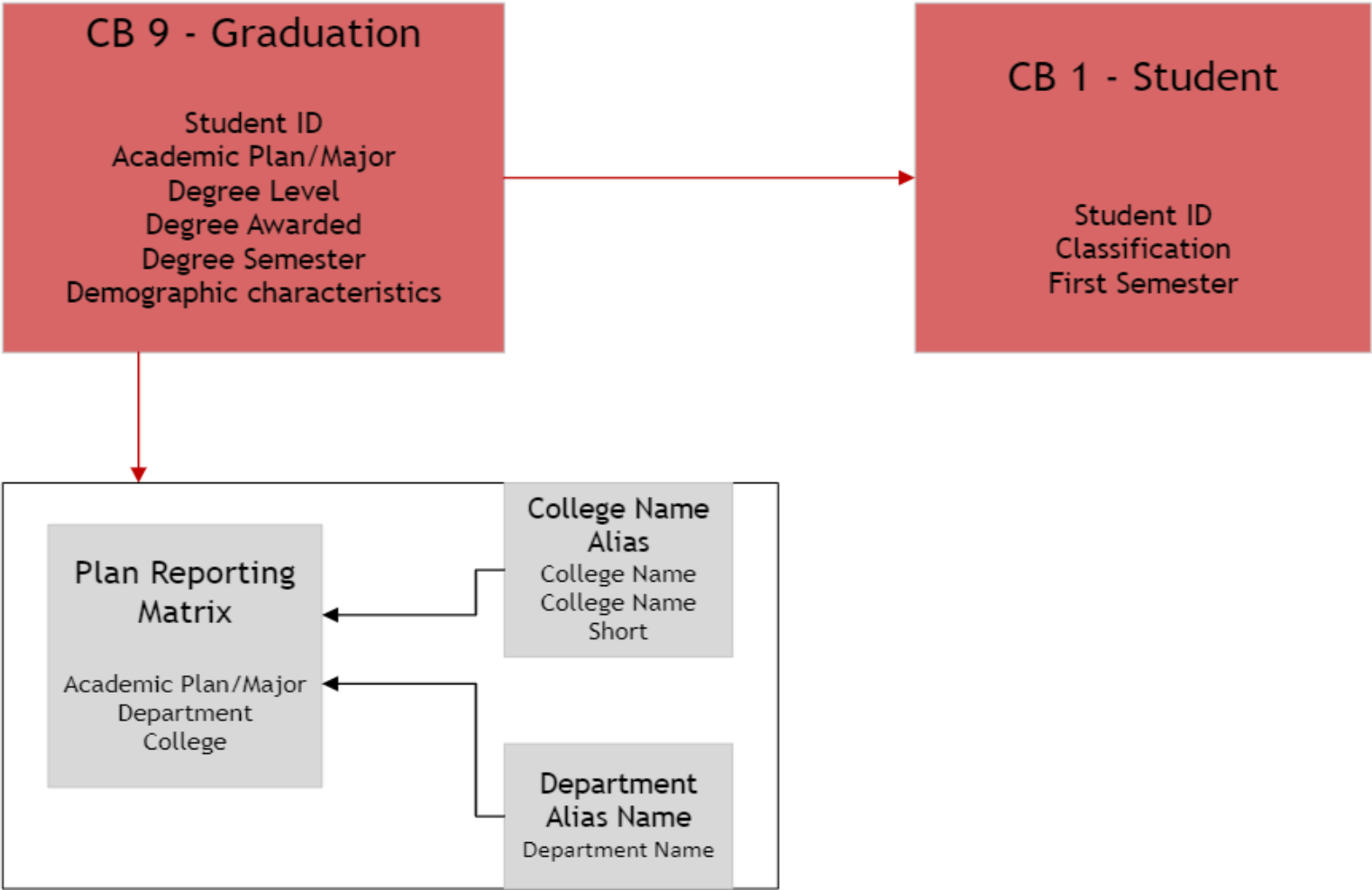
# UH Time to Degree Dashboard

- One source of data
- Allows for longitudinal analysis
- Easily accessible data
- Provide data by demographic information
- No dashboard on Time to Degree for graduate students

# Data Decisions

- Use the CB tables already in our Data Warehouse (DW)
  - Needed to be easy to maintain
  - Years to include
  - Choose the tables to use
  - Data fields to include in the data model
  - Data preparation in SAS for proof of concept

# Data Model Using CB Tables in DW



# Time to Degree

Number of Semesters:

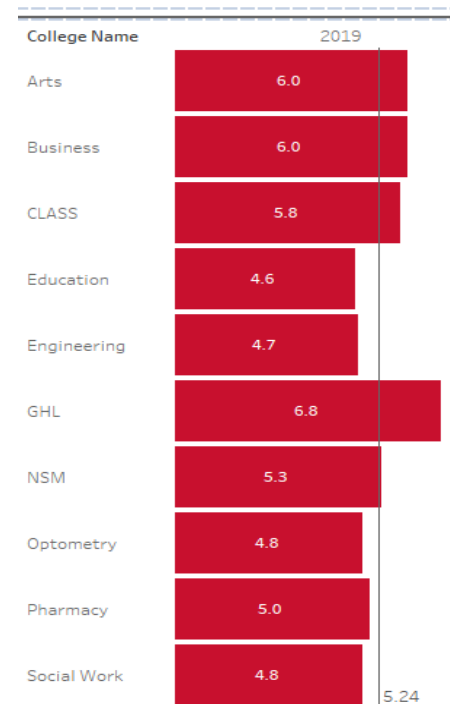
$(\text{Degree Semester} - \text{First Semester} + 10) / 10$

$(2150 - 1850 + 10) / 10 = 31$

Time to Degree in Years:

Number of Semesters / 3

$= 31 / 3 = 10.33$  years



# Data Validation

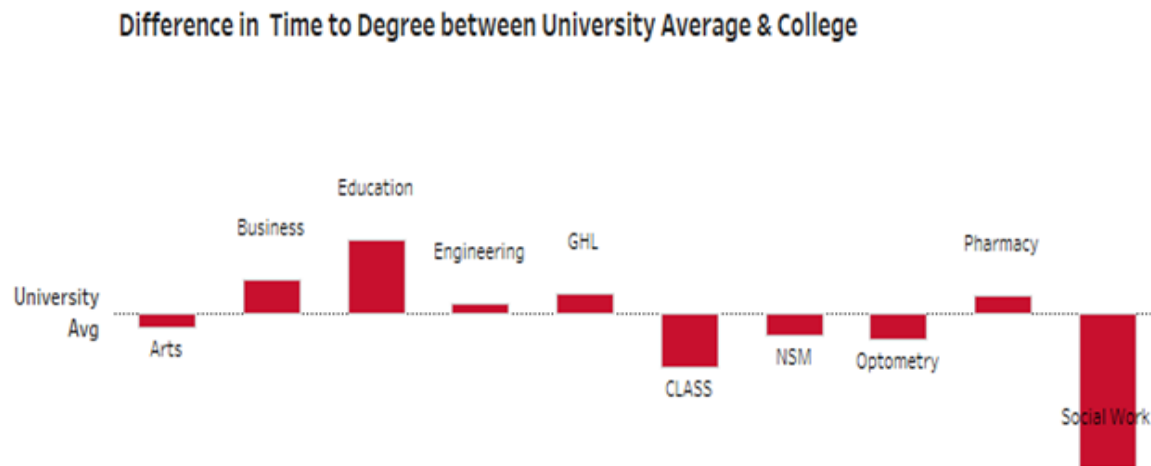
- Accurate calculation of the average time to degree
  - Data checking with 2017 and 2018
    - Not artificially truncating time to degree for students who may have started prior to Fall 2007
    - Compare DW numbers with existing CB reports
  - Address any changes in student ID overtime

# Data Visualization

- What information we want to communicate on the dashboard?
  - Create a dashboard prototype
- Who is our intended audience?

# Key Considerations for Dashboard Prototype

- Clear and precise labeling
- Uniform scale
- How much detail? Drill down vs. filter?
- Visual aesthetics
- UH color palette



# Demonstration



# Future

- Datawarehouse table for graduate level time to degree
- Extract for Tableau server
- Use this dashboard prototype with the Tableau extract
- Production dashboard for UH By the Numbers website





Thank you!!

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