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# MIS 6380

## Data Visualization

When: Friday, 9:00 AM – 11:45 AM  
Classroom: JSOM 11.206

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*Fall, 2016*

**Instructor:** Kelly Slaughter, PhD  
**E-mail:** kts130030@utdallas.edu  
**Office:** JSOM 2.703  
**Office Hours:** Friday, 8:00 AM and by appointment  
**TA:** Anuj Gulati  
**E-mail:** Anuj.Gulati@utdallas.edu

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### Course Description

The growth in the volume of data collected by organizations has resulted in the need for a broad range of data analysis techniques through which an organization's goals can be advanced. In this data visualization class we examine data presentation and exploration through such visualization tools as Tableau, R, Python (Seaborn), and d3.

### Learning Outcomes

- Students should be able to apply their understanding of general data visualization principles across contexts and tools
- Students should be able to create meaningful general purpose, analytic, and dynamic data visualizations through a variety of data visualization tools
- Students should be able to identify appropriate business-oriented opportunities for the application of data visualization

### Evaluation

Student grades will be determined through group homework and exams. There are no opportunities for earning extra credit.

Group Homeworks (8)	40%
Exams (3)	60%

Homeworks will be completed in assigned groups. Descriptions of the homework assignments will be posted as they are assigned. Each homework is worth 5% of the overall grade. Homework can be turned in one day late for 50% credit.

The exams will consist of a traditional multiple choice/short answer closed book/note exam and an open notes/book exercise. Each of the exams is worth 20% of the final grade. If an exam is missed due to an excused absence, a 'real time' exam (oral questions to be answered on a white board or laptop) will be provided if requested within 24 hours of the scheduled exam. Requests for exam regrades will be performed comprehensively for the entire exam.

### Materials

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A laptop is required (R and Python versions for Windows, Mac, and Linux are available; Tableau is available via a student license).

No textbooks are required but links to online books available through the UT Dallas library will be provided. Online readings will be posted in eLearning.

### Milestones

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#### Homework Assigned/Due

HW1: September 9<sup>th</sup>, September 15<sup>th</sup>  
HW2: September 16<sup>th</sup>, September 22<sup>nd</sup>  
HW3: September 30<sup>th</sup>, October 6<sup>th</sup>  
HW4: October 7<sup>th</sup>, October 13<sup>th</sup>  
HW5: October 21<sup>st</sup>, October 27<sup>th</sup>  
HW6: November 4<sup>th</sup>, November 10<sup>th</sup>  
HW7: November 11<sup>th</sup>, November 17<sup>th</sup>  
HW8: November 18<sup>th</sup>, December 1<sup>st</sup>  
*(Homework can be submitted 24 hours after the deadline with a penalty of 50%)*

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#### Exams

Exam #1: September 23<sup>rd</sup>  
Exam #2: October 28<sup>th</sup>  
Exam #3: December 2<sup>nd</sup>

## Class Administration

eLearning will be used for class content (e.g., class slides and assignment descriptions) and the recording of grades. Slides will be posted in PDF format shortly before class is held (or shortly after in some cases where having the slides in advance may not be consistent with the lesson of a particular day).

Class announcements (e.g., change in assignment dates) will be posted in eLearning. It is the students' responsibility to track these announcements.

We will conduct many hands-on exercises in the classroom. Students should have a laptop for use in the classroom. Instructions for installing tools will be provided.

## Grading Policy

≥ 93.3%	A
≥ 90.0%	A-
≥ 86.7%	B+
≥ 83.3%	B
≥ 80.0%	B-
≥ 76.7%	C+
≥ 73.3%	C
≥ 70.0%	C-
≥ 66.7%	D+
≥ 63.3%	D
≥ 60.0%	D-
< 60.0%	F

Grades will be rounded to the tenth, thus an 89.94 is a B+ and an 89.95 is an A-

## General Policies and Procedures

The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus. Please go to <http://go.utdallas.edu/syllabus-policies> for these policies.

## Class Calendar *(subject to change; substantive changes will be posted in eLearning)*

Date	Description
August 26 <sup>th</sup>	Intro to Visualization; Representations
September 2 <sup>nd</sup>	Best Practices; History
September 9 <sup>th</sup>	Tableau (hw1)
September 16 <sup>th</sup>	Tableau (hw2)
September 23 <sup>rd</sup>	Exams
September 30 <sup>th</sup>	ggplot2 (R) (hw3)
October 7 <sup>th</sup>	ggplot2 (R) (hw4)
October 14 <sup>th</sup>	ggplot2 (R)
October 21 <sup>st</sup>	Shiny (hw5)
October 28 <sup>th</sup>	Exams
November 4 <sup>th</sup>	Seaborn (Python) (hw6)
November 11 <sup>th</sup>	d3 (hw7)
November 18 <sup>th</sup>	d3 (hw8)
November 25 <sup>th</sup>	Off
December 2 <sup>nd</sup>	Exams