Course	**ITS 4353.501 83875**
Course Title	**Business Analytics**
Professor	Kelly Slaughter, PhD
Term	Fall 2016
Meetings	Tues and Thurs, 5:30 – 6:45 PM, JSOM 1.117

Professor's Contact Information

Office Phone	972-883-4755
Office Location	JSOM 2.703
Email Address	kts130030@utdallas.edu
Office Hours	Tues and Thurs, 4:00 to 5:00 PM and by appointment
Other Information	TA: Sunil Yadav, sxy152530@utdallas.edu

General Course Information

Pre-requisites, Co-requisites, & other restrictions	Recommended Prerequisite: ITSS 3312. Prerequisites: (MATH 1326 or MATH 2414 or MATH 2419) and (MATH 2333 or OPRE 3333 or MATH 2418 or MATH 2415 or CS 2305)
Course Description	Organizations are increasingly employing rigorous data-driven analytic techniques to address business intelligence demands. In ITS 4353 we examine several data-driven analysis approaches often referred to collectively as analytics and apply these techniques through the use of R and Python.
Learning Outcomes	Students should be able to describe basic analytic techniques with respect to the selection of appropriate approaches for a given context Students to become proficient in the application of R and familiar with Python as it relates to analytics Students should be able to identify issues with data prior to analysis and prepare the data for analytic analysis (tidy and transform)
Required Texts & Materials	Laptop (we will install R, RStudio, and Anaconda (Python)); Windows, Mac, or Linux Articles will be assigned through the semester (posted in eLearning)
Suggested Texts, Readings, & Materials	Han, J., Kamber, M., and Pei, J. (2012) Data Mining: Concepts and Techniques, Morgan Kaufmann (available on-line via library) Ledolter, J. (2013) Data Mining and Business Analytics with R, Wiley (available on-line via library)

Assignments & Academic Calendar

Date	Description	Assignments
August 23rd	Intro to Analytics	
August 25th	Intro to R	
August 30th	Tidying in R	
September 1st	Transforming in R	Homework 1 Assigned (due 9/7)
September 6th	Visualization	
September 8th	Distance metrics	Homework 2 Assigned (due 9/14)
September 13th	Partition Clustering in R	
September 15th	Partition Clustering exercises	Homework 3 Assigned (due 9/21)
September 20th	Hierarchical Clustering in R	
September 22nd	Guest speaker	
September 27th	Density Clustering in R	Homework 4 Assigned (due 10/3)
September 29th	Clustering Evaluation	
October 4th	Review	
October 6th	Exam	
October 11th	K-Nearest Neighbor in R	
October 13th	K-Nearest Neighbor exercises	Homework 5 Assigned (due 10/19)
October 18th	Logistic Regression in R	
October 20th	Logistic Regression exercises	Homework 6 Assigned (due 10/26)
October 25th	Decision Trees in R	
October 27th	Decision Tree exercises	Homework 7 Assigned (due 11/2)
November 1st	No class on 11/1	
November 3rd	Review	
November 8th	Exam	
November 10th	Guest speaker	
November 15th	Python, notebooks, and pandas	
November 17th	Python and unsupervised learning	Homework 8 Assigned (due 11/10)
November 22nd	Off	
November 29th	Python and supervised learning	Homework 9 Assigned (due 12/5)
December 1st	Project	
December 6th	Project	Project Due

Course Policies

Grading (credit) Criteria	Group Homework Assignments (9) 27% Exams (2) 48% Project 25% > 93.3% A > 90.0% A- > 86.7% B+ > 83.3% B > 80.0% B- > 76.7% C+ > 73.3% C > 70.0% C- < 60.0% F Grades will be rounded to the tenth, thus an 89.94 is a B+ and an 89.95 is an A
Make-up Exams	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
Extra Credit	No extra credit assignments are available
Late Work	Homework can be turned in one day late for 50% credit
Special Assignments	None
Class Attendance	Students are responsible for all material covered and administrative changes, covered in class. If you miss a class, follow up with a peer to understand what was missed and meet with the instructor to resolve any confusion.
Classroom Citizenship	eLearning will be used for class content (e.g., class slides and assignment descriptions) and the recording of grades. Slides and other class materials will be posted before class is held. Class announcements (e.g., change in assignment dates) will be posted in the eLearning announcements. It is the students' responsibility to regularly check the announcements (typically by having the announcement automatically forwarded to their email accounts).
Comet Creed	*This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:* *"As a Comet, I pledge honesty, integrity, and service in all that I do."*
UT Dallas Syllabus 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.*

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.