Accounting 7397

Data Analytics Level 1

Data Acquisition, Structuring, and Definition

Tentative schedule

Semester:	Spring 2018; Thurs 3-6PM, or Sat 9-12AM; Room TBD
Professor:	Ellen Terry
Office Hours:	Room 360K Melcher Hall. To be announced in class.
Telephone:	713-743-4820
E-mail:	ewterry@bauer.uh.edu
Blog:	http://econolytics.org
Textbooks:	**R for Data Science** Garrett Grolemund Hadley Wickham http://r4ds.had.co.nz/
Other Materials and Tools:	Laptop Computer (Bring to Every Class); RStudio (available for download: https://www.rstudio.com/);

Course Objective: Data Analytics 1 introduces *data acquisition, transformation and description),* using the R language and SQL Server platforms*.*

The first section of the course focuses on R skills, the second section on SQL, and the last section on data description *(distributions, correlation, clustering)* and simple regression modeling.

Learning Goals: The C.T Bauer College of Business and the Department of Accountancy & Taxation have established Learning Goals for each of our programs as part of our accreditation by The Association to Advance Collegiate Schools of Business. Additional information about the learning goals for accounting may be found at http://www.bauer.uh.edu/departments/accy/why-accounting/accounting-learning-goals.php.

This course incorporates the following MSACCY Program Learning Goals: (a) oral communication skills through team and individual solution presentation; (b) written communication skills through team and

individual solution development (c) research skills through individual research topics (d) technological skills through solution development using RStudio and SQL, and (e) analytical problem solving skills through solution envisioning and development.

Class Methodology: You will be expected to complete homework assignments prior to class - the knowledge is cumulative and the course is fast paced, so it will be important to stay on track. The course will blend lectures, discussions, and "hands-on" exercises for comprehensive understanding.

Grading/Evaluation: The grade for this course will be determined by 3 quizzes. Maximum point values for each are as follows:

Exam 1	50 Pts.
Exam 2	50 Pts.
Exam 3	50 Pts.
Total Points	**150 Pts.**

Blackboard: You should use Blackboard Learn to access course material, handouts, files and announcements. Please verify that you are able to logon to the class site as soon as possible do that you do not miss out on any important information. *All Assignments will be submitted through Blackboard.*

Withdrawals and Incompletes: University policies regarding withdrawal dates and procedures apply. An incomplete designation is given in rare instances when a student doing acceptable work is unable to complete the course due to circumstances beyond the students control.

Academic Honesty: The University of Houston Academic Honesty Policy is strictly enforced by the C.T. Bauer College of Business and the Department of Accountancy & Taxation. No violations of this policy will be tolerated in this course. A discussion of the policy is included in the University of Houston Student Handbook at http://www.uh.edu/dos/hdbk/acad/achonpol.html. Students are expected to be familiar with this policy.

Students with Special Needs: The C. T. Bauer College of Business would like to help students who have disabilities achieve their highest potential. To this end, in order to receive academic accommodations, students must register with the Center for Students with Disabilities (CSD) (telephone 713-743-5400), and present approved accommodation documentation to their instructors in a timely manner.

Cell Phones and Computers: Please be professional and courteous by turning off your cell phones during the class. **Computers with Office 2016 will be required at all classes**.

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Section I	Data Acquisition and Structuring
Week 1	Introduction to R language and Data Visualization
Week 2	Data Structuring with R
Week 3	*Exercises*
Week 4	**Quiz 1** *(Review 'R for Data Science' Sections I & II except Ch 5 & 10)*

Section II	SQL and Relational Data
Week 5	SQL and Relational Data Models
Week 6	*Exercises*
Week 7	Integrating R and SQL for Data Analysis
Week 8	*Exercises*
Week 9	**Quiz 2** *(Review 'R for Data Science' Sections I & II except Ch 5)*

Section III	Data Description
Week 10	Distribution, Variance, Visualization
Week 11	Correlation, Clustering, Principal Components Analysis
Week 12	Regression Based Description
Week 13	**Report**