LOYOLA
UNIVERSITY CHICAGO
1870
AD · MAJOREM · DEI · GLORIAM

QUINLAN
SCHOOL *of* BUSINESS

Schreiber Center • 16 E. Pearson St.
Water Tower Campus • Chicago, IL 60611
LUC.edu/Quinlan

Jose Luis Rodriguez
Schreiber Center 307
jrodriguezorjuela@luc.edu
(312) 915-6344
Office Hours: Mon, Wed Before Class or By Appointment

BSAD 343H, Business Analytics Honors
Spring 2018, Tue, Thru 11:30AM – 12:45PM Schreiber Center 302

Catalog Description
Business analytics leverages the vast amount of streaming data ("big data") to extract actionable insights and drive better business decisions. It incorporates the best in data engineering, analytics methods, visualization techniques and communication of results. Business analytics rely heavily on statistical and quantitative analysis, predictive and prescriptive models to provide a forward-looking business decision making.

Course Overview
This class introduces students to basic principles in data investigation and modeling, and the fundamentals on how to turn big data into intelligent actionable insights. Equal time is devoted to class presentations and hands-on laboratory sessions. Emphasis is placed on the business analytics process design, use of analytical techniques, data mining methodologies, and data visualization to make evidence-based decisions. Through the use of real business case studies and lab sessions students will develop a comprehensive, innovative, and practical approach to analytics that enables them to tackle diverse and complex business problems.

Course Objectives and Learning Outcomes
1. Explain the key factors differentiating business intelligence from business analytics
2. Frame a problem in a business analytics context to drive better decision making and to gain the competitive edge
3. Identify the major steps in the design of a typical business analytics process
4. Explain core design concepts and methodologies in data modelling, and data management specific to business analytics
5. Describe the big data effect, and its main implications including social and ethical issues
6. Appraise various technological solutions for different data conditions
7. Determine the proper analytics methods for descriptive, predictive, and prescriptive analyses and applications
8. Acquire hands-on experience with various tools for data analytics, data visualization, and smart reporting of results
9. Create a compelling and novel case study depicting some of today's real-world examples

Optional Book: *Keeping Up with the Quants* by Thomas H. Davenport, Harvard Business Review Press, 2013

Lab Resources
Students will have the opportunity to work with real data and some leading-edge tools in the industry such as R (statistical computing and graphics), Tableau (visual analytics), IBM Watson (natural language cognitive analytics), or Python Anaconda Distribution as needed.
Additional Resources
Additional notes, reading material and on-line references will be shared as needed during class.

Special Notes
This class may occasionally deviate from the course outline above. The instructor reserves the right to make changes as needed to the course syllabus. As a courtesy to others and to minimize distractions please turn-off or mute any cellphones, or audible devices.
Laptops and alike are to be used solely for class purposes and only when permitted.

Quinlan School of Business Policies:

Attendance
       Class attendance and participation are fundamental components of learning, so punctual attendance at all classes, for the full class meeting period, is expected of Quinlan students.
       If you must miss a class or leave early, please notify in advance. You are responsible for any class assignments or requirements missed during an absence.

Make-Up Examinations
       Loyola University academic policy provides that tests or examinations may be given during the semester or summer sessions as often as deemed advisable by the instructor. Because Quinlan faculty believe examinations represent a critical component of student learning, required examinations should be taken during the regularly scheduled class period. **Make-up examinations are discouraged**. Exceptions may be granted only by the faculty member or department chair, and only for unavoidable circumstances (illness verified by a signed physician's note, participation in intercollegiate athletic events, subpoenas, jury duty, military service, bereavement, or religious observance). A make-up final examination may be scheduled only with the permission of the appropriate Quinlan Assistant or Associate Dean.

Academic Integrity

       All members of the Quinlan School shall refrain from academic dishonesty and misconduct in all forms, including plagiarism, cheating, misrepresentation, fabrication, and falsehood…Plagiarism or cheating on the part of the student in individual or group academic work or in examination behavior will result minimally in the instructor assigning the grade of "F" for the assignment or examination.

       For further information about expectations for academic integrity and sanctions for violations, consult the complete Quinlan School of Business Honor Code and Statement of Academic Integrity on the Quinlan website:

http://www.luc.edu/media/lucedu/quinlanschoolofbusiness/pdfs/Honor-Code-Quinlan July2012.pdf

Grading Criteria

Examination and Participation

There will be one midterm exam, open notes and laptops are allowed. Exam material coverage are cumulative with more weight given to recent topics. Grading is heavily based on methodology, formulating and steps clarity in solving a problem. Attention is placed on acquiring analytical thinking and problem-solving skills in a business environment driven more and more by data and metrics.

Missing an exam without a valid excuse and prior notice will result in a zero grade. The instructor reserves the right to deem an excuse valid or not.

Self-Study

Take-away review problems and reading materials will be assigned. It is highly recommended for students to enhance their learning in class by following up with these self-studies. Homework will not be graded but will be selectively reviewed in class. Periodically there may be a surprise short in-class quiz. These will count as extra credit. Exams and quizzes are based on material covered in class lecture and lab work, and assigned review problems.

Grading

Labs	35
Midterm	30
Final Project	30
Presentation	05

Course Grading Scale		Loyola University Grading Weights	
A	100-93%	A	4.00
A-	92-90	A-	3.67
B+	89-87	B+	3.33
B	86-83	B	3.00
B-	82-80	B-	2.67
C+	79-77	C+	2.33
C	76-73	C	2.00
C-	72-70	C-	1.67
D+	69-67	D+	1.33
D	66-60	D	1.00
F	59 and below	F	0.00

Weekly Course Outline

Class Week	Class Lecture	Lab Work
Week 00 Jan 16 – Jan 18	Introduction to Business Analytics	Tools and Technology Due: Jan 25
Week 01 Jan 23 – Jan 25	Design Concepts and Methodologies	Building A Prototype Due: Feb 01
Week 02 Jan 30 – Feb 01	Business Discovery and Data Sourcing	Working with Data ("Big Data") Due: Feb 08
Week 03 Feb 06 – Feb 08	Data Preparation and Flow	Practical Studies Due: Feb 15
Week 04 Feb 13 – Feb 15	Descriptive Analytics	Statistical Measures Due: Feb 22
Week 05 Feb 20 – Feb 22	Visual Analytics	Visual Exploration Due: Mar 06
Week 06 Feb 27 – Mar 01	Review	Midterm
Week 07 Mar 06 – Mar 08	Spring Break	
Week 08 Mar 13 – Mar 15	Predictive Analytics	Modeling and Forecasting Due: Mar 22
Week 09 Mar 20 – Mar 22	Classification Analysis	Working with Insurance Data Due: Mar 29
Week 10 Mar 27 – Mar 29	Prescriptive Analytics	Remedies and Solutions Due: Apr 05
Week 11 Apr 03 – Apr 05	Clustering Analysis	Unsupervised Learning Due: Apr 12
Week 12 Apr 10 – Apr 12	Visualization and Smart Reporting	Charts, Metrics, and Scores Due: Apr 19
Week 13 Apr 17 – Apr 19	Industry Trends and Case Study	A Sample Walk-Thru Due: Apr 26
Week 14 Apr 24 – Apr 26	Data Management, Governance & Ethics	Practical Studies Due: May 03
Week 15 May 01 – May 03	Presentations Final Project	