Fisher College of Business
The Ohio State University

Syllabus

Business Adm 3632.05 - Design and Development of Business Analytics Solutions
(3 Credit Hours)
Spring Semester 2015

Instructor: Ralph Greco, BS. MS. Industrial Engineering
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(cell) 614-286-3350

Class Schedule: Wednesdays 5:30 - 7:30, Knowlton 195
Thursdays 5:30 - 7:30, Schoenbaum 319

This course is the second in a two-course sequence that comprises the course requirement for students enrolled in the Fisher Business Analytics Cluster and which, when combined with other requirements, provides students with in-depth competence in Business Analytics business practices. Instructional staff for this second course in the two-course sequence includes Faculty from the Fisher College as well as representatives from the sponsoring companies -- Scotts MiracleGro, JPMorganChase, Cardinal and IBM.
Learning Objectives

1. To gain hands on experience in the execution of a project focusing on Business Analytics.
2. To gain experience in working in small teams with tight deadlines. All projects will have a seven-week time frame, and students will work on two different projects (same team) during the semester.
3. To have practical exposure to presenting results of a Data Analysis. What insights can be obtained for the data/model, and how can those insights drive further actions or value?
Course Overview

This semester, the class will focus on Student lead/driven projects. These projects have been selected by either our Sponsors (Scotts MiracleGro, JPMorgan Chase, or Cardinal) or by Faculty.

The class will be divided into teams of no more than five, and will be assigned projects during the third week of class. Projects will be assigned by student preference and background.

The students will work closely with the executives from our Sponsors, and their key executive assigned to work with the team. Students are expected to discuss their project plan and ideas with the Sponsor and Fisher Faculty.

The students will create and present the following deliverables for each of the projects they are assigned -

1. Power Point presentation -- Project Plans
2. Power Point presentation -- Progress Report (twice)
3. Power Point presentation -- Final Results
   a. Description of Question to be answered
   b. Data utilized, model utilized
   c. Insights and Actions

The timing of these deliverables is documented in the class schedule. Electronic copies of these presentations will be due to the instructor by 5pm on the day they are to be presented. No exceptions.
Course Mechanics

Grading

Book Report 10%
Prescriptive Assignment 10%
“R” Work 10%

Class Participation 20%

First Project 50% (in total)
   Project Plan 10%
   Progress Reports 15%
   Final Presentation 25%

All students in the team will receive the exact same grade; there will be NO differentiation of the scoring amongst the teams. At all.

The final presentation will be graded for both the content and, just as important, how than content is presented.

Project sponsors will be asked for input on grades for Final Presentations.
## Tentative Schedule for Spring Semester

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<thead>
<tr>
<th>Date</th>
<th>Lecturer</th>
<th>Topic</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-14, 1-15</td>
<td>Greco</td>
<td>Class Introductions</td>
<td>Class Introductions</td>
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<tr>
<td></td>
<td></td>
<td>Initial Discussion of Projects and potential team creation</td>
<td>R Assignment</td>
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<tr>
<td>1-21, 1-22</td>
<td>Greco</td>
<td>Prescriptive Analytics</td>
<td>Prescriptive Analytics</td>
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<tr>
<td></td>
<td></td>
<td>Discussion</td>
<td></td>
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<tr>
<td>1-28, 1-29</td>
<td>Greco</td>
<td>No Class</td>
<td>Work on Projects</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>R Assignment Due</td>
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<tr>
<td>2-4, 2-5</td>
<td>Greco</td>
<td>Project Plan</td>
<td>Student teams will present to faculty and peers their initial project plan and work stream</td>
</tr>
<tr>
<td>2-11, 2-12</td>
<td>Greco</td>
<td>No Class</td>
<td>Work on Projects</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Prescriptive Analytics Assignment Due</td>
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<tr>
<td>2-25, 2-26</td>
<td>Greco</td>
<td>Progress Reports</td>
<td>Student teams will present to faculty and peers progress to date on their projects</td>
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<tr>
<td>3-4, 3-5</td>
<td>Greco</td>
<td>Visualization Discussion</td>
<td>Book Reports Due</td>
</tr>
<tr>
<td>3-11, 3-12</td>
<td>Greco</td>
<td>Progress Reports</td>
<td>Student teams will present to faculty and peers progress to date on their projects</td>
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<tr>
<td>3-18, 3-19</td>
<td>Greco</td>
<td>No Class</td>
<td>SPRING BREAK</td>
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<tr>
<td>3-25, 3-26</td>
<td>Greco</td>
<td>NO Class</td>
<td>Work on projects</td>
</tr>
<tr>
<td>4-1, 4-2</td>
<td>Greco</td>
<td>Progress Reports</td>
<td>Student teams will present to faculty and peers progress to date on their project</td>
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<tr>
<td>4-15, 4-16</td>
<td>Greco</td>
<td>NO Class</td>
<td>Work on Projects</td>
</tr>
<tr>
<td>4-22, 4-23</td>
<td>Greco</td>
<td>Final Presentations</td>
<td>Student teams will present to faculty and peers progress to date on their project</td>
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Disability Services

Any student who feels s/he may need an accommodation based on the impact of a disability should contact me privately to discuss your specific needs. Please contact the Office for Disability Services at 614-292-3307 in room 150 Pomerene Hall to coordinate reasonable accommodations for students with documented disabilities.

Academic Misconduct

This policy will be strictly followed in both recitation and lecture. Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the University’s Code of Student Conduct, and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the University’s Code of Student Conduct and this syllabus may constitute “Academic Misconduct.”

The Ohio State University’s Code of Student Conduct (Section 3335-23-04) defines academic misconduct as: “Any activity that tends to compromise the academic integrity of the University, or subvert the educational process.” Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the University’s Code of Student Conduct is never considered an “excuse” for academic misconduct, so students should review the Code of Student Conduct and, specifically, the sections dealing with academic misconduct.

If a professor or TA suspects that a student has committed academic misconduct in this course, he or she is obligated by University Rules to report suspicions to the Committee on Academic Misconduct. If COAM determines that you have violated the University’s Code of Student Conduct,
Conduct (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the University.

Attachment #1

Books for Review (Spring 2014)


The Shallows. Nicholas Carr (2009)


The Optimization Edge. Steve Sashihara. (2011)

The Signal and The Noise. Nate Silver. (2012)

The Big Switch. Nicholas Carr. (2013)


To Save Everything, Click Here. Evgeny Morozov. (2013)


What to Expect When No Ones Expecting. Jon Last (2013)


Predictive Analytics: The Power to Predict Who Will Click, Buy, Lie or Die. Eric Siegel. (2013)

Moneyball. Michael Lewis. (2011)


Freakanomics. Steven Levitt. (2009)


Thinking, Fast and Slow. Daniel Kahneman. (2011)


The Information. James Gleick. (2011)
Attachment #2

Glossary of Terms (ones to know!)

A/B Testing
Classification
Cloud Computing
Cluster Analysis
Crowdsourcing
Data fusion
Data Mining
Data Warehouse
Ensemble Learning
ETL (extract transform load)
Genetic Algorithms
Hadoop
Machine Learning
Mashup
Metadata
Network Analysis
NoSQL
Optimization
Pattern Recognition
Predictive Models
R
Regression
Sentiment Analysis
Signal Processing
Spatial Analysis
Spatial-Temporal Analysis
SQL
Statistics
Stream Processing
Structured Data
Unstructured Data
Visualization