Fisher College of Business
The Ohio State University

Syllabus

Business MHR 7303 – HR Analytics
(1.5 Credit Hours)
Fall Semester, 2ND Term, 2016

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Class Schedule Wednesday Section #1 6:00 – 9:15, Gerlach 365

This is a 1.5-hour course in the MHR program. Overall focus of the course will not be in building detailed models or programming, but instead the process associated with Analytics and the overall impact on decision-making. Both Faculty of FCOB, and external resources will present lectures. Tools will be discussed and utilized, but this is also not a detail examination of the solutions available today.

Learning Objectives

1. To gain a basic understanding of Business Analytics and its applicability in the HR decision process
    a. Understand the fact from fiction in the current environment.
    b. What are Big Data and other terminology that are used in the marketplace today?
2. Focus on the specific areas of HR in which analytics can play a part in the decision process
    a. Awareness of HR practice areas.
    b. Discuss the kinds of issues/questions that analytics can provide insight
3. Communication of Results
    a. When/How to utilize particular visualizations to describe the process and model used in the analysis.
    b. Take technical results and communicate those results to a wide audience

Course Overview

The overall objective of this course is to familiarize the students with the concept of Data Analytics (Big Data) and its applicability in a business environment. This course will utilize both faculty from Fisher College as well as Corporate Executives from sponsoring companies and Analytics vendors. These individuals will lead discussions on various topics central to Analytics.

At the end of the course, students should have acquired an understanding of Analytics – the terminology, concepts and familiarity of potential tools and solutions that exist today. This will not be an in depth study of modeling or optimization techniques, but when the course sequence is completed, students should be better familiar with overall analytics tools/techniques and their use in corporate environments.

The course is a combination of lectures and group exercises (teams of 2-3). Class contribution will be a key component of the overall grade, and students are expected to be prepared each week when they attend. It is assumed that each student will be familiar with basic technology (web search, etc.), have access to a computer (not an iPad), and have basic knowledge of statistics, and math. We will not be finding a solution for a quartic equation, but we will be discussing regression methods. Be prepared accordingly.

All students are expected to maintain professionalism in their interactions with the external speakers. This includes interactions during their presentations, and in any outside classroom events (social or otherwise).

Students need to be ready to go each week in class. Discussions in class can only be fueled by those individuals that are ready to ask questions, provide feedback (non emotional) and defend their positions with logic and facts – just as you will have to do in a corporate environment.

There will be multiple opportunities/requirements for the student to present in class. This includes presenting to their peers, OSU Faculty and external speakers.

Optional Text

"Keeping up with the quants: your guide to understanding and using analytics." Thomas Davenport, Jinho Kim. Harvard Business Review Press, Boston Mass. 2013. ISBN – 978-1-4221-8725-8

Course Mechanics

Grading

Class Contribution	25%
Group Presentations/Homework	
Group Assignment #1	15%
Group Assignment #2	15%
Group Assignment #3	15%
Group Assignment #4	15%
Group Assignment #5	15%
Extra Credit Book Report	2 points
Extra Credit Data Viz	1 point

Tentative Schedule

Date	Lecturer	Topic	Learning Objective	Reading and Assignments
Oct – 18th	Greco	Class Introduction and expectations. Big Data and Analytics	Review of course topics, objectives, and expectations of instructor. General definition of Analytics and Big Data, with examples from industry. Review of grading mechanism and extra credit opportunity. Class introductions	**Assignment – What's your Knack**
Oct – 25th	Greco	Framing the Problem Descriptive, Predictive, and Prescriptive Analytics	Analytics starts (not always) with recognizing a problem or decision that needs to be made and begin the work to solve it. A very quick run through of the models can be used in Analytics.	**Assignment – Textio work** **Assignment Due – Knack Discussion**
Nov – 1st	Greco	Descriptive, Predictive, and Prescriptive Analytics	Working with an HR data set, and what insights (if any) we can find and present	**Assignment – Watson Tone Analyzer** **Assignment Due – Textio**
Nov – 8th	Greco	Descriptive, Predictive and Prescriptive Analytics	Continuation of Previous Work on the Data Set	**Assignment – Injury Data Set** **Assignment Due – Watson Tone Analyzer Discussion**
Nov – 15th	Greco	Working with the data and presentation of results	Working with a second HR data set, and what insights (if any) we can find and present	
Nov – 22th	**No Class – Thanksgiving Break**			
Nov – 29th	Greco	Working with the data and presentation of results	Continuation of previous discussion on data and presentation skills, with a focus on Visualization	**Assignment – Attrition Data Set Visualization**
Dec - 6th	Greco	Iron Viz Competition	Data Set provided in class, and given 1hour to create compelling visualization	**Assignment Due – Attrition Data Set**

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