

ITAM Summer School

Managing the Data Analytics Organization

Draft Syllabus

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Office Location:
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Consultation Times:
Class Location:
Class Meeting Times: Wednesdays May 31 – June 28 (5) 6-10pm
Fridays June 2 and June 16 (2) 6-11pm

Brief Description

Big data, business intelligence, data analytics - even a "Chief Data Officer"? What does it all mean? What do managers need to know? Is it even important or just the current fad? While it may evolve, it seems extremely unlikely that it will just go away. Managers need an understanding of the concepts, opportunities and pitfalls. This heavily case study and readings based course will introduce students to big data and the opportunities for analysis, potential outcomes and effects on organizational structure, ethics, security and accountability considerations. Students will be invited to identify potential big data sources that might be relevant to their current or expected organizations, and design an analytical program to take advantage of the opportunities it provides, while identifying problem areas in so doing.

Learning Objectives

Course attendees will be able to influence and provide direction for the creation and sustainability of the data/analytics functions in a modern organization desiring to leverage big data for competitive advantage. Specifically, they will be able to:

1. Provide advice on the opportunities afforded to the modern organization by big data and analytics and how to use this for competitive advantage;
2. Determine an appropriate management structure for the data analytics function
3. Develop and introduce a system to provide proper data governance at the operational, tactical and strategic levels.
4. Assess the performance of the analysts and develop a management structure to ensure high quality performance

Course Materials and Structure

Each session will usually begin with a short presentation. Note that all sessions (except the first and last) require extensive pre-reading of several articles or book chapters. As such, it is expected the course participants will read all articles set before coming to class and make sufficient notes to enable them to be able to present the key points and make an evaluation of the strength of the articles if called upon to do so. All materials required for the course will be made available in electronic form on the ITAM Learning Management System.

Most sessions will involve considerable classroom and group discussion. All participants will be expected to present material to the whole class, either as a result of group discussion or individual work.

Assessment

The assessment for this course will be primarily around preparedness for and participation in class room discussion and a major project designed to illustrate the course material and provide a real-world experience of concepts.

Pre-reading of prescribed material	25%
Active participation in class, attendance and timeliness	20%
Group Major Project paper	30%
Final Group presentation	25%

Major Project

In teams of 4 or 5, students will identify sources of big data that, when analyzed will present an opportunity to increase revenue, offer a new product or reduce costs (or a combination of all three) for an organization with which the group has some familiarity. The Project Group will present their findings to the class and provide a brief supporting report. The project will apply the lessons learned in this course and seek to demonstrate the potential of the analytics function. Project topics in the form of an executive summary (maximum one page) are due in class on June 7.

The presentation will address the following issues, as applicable: an identification of the problem or opportunity, the data sources that might contribute to its resolution, the difficulty and tasks associated with collecting the data, a discussion of any ethical issues involved, data security and privacy issues, changes to the existing organization that may be necessary, a discussion as to the necessary resources and how these might be acquired, and the expected benefits against costs. Any other issues deemed relevant may be included.

The class presentation should last no more than 20 minutes, using visual aids to bring out the main findings of the project. It should cover all the issues listed above briefly and will reach a recommendation supported as robustly as possible. There will also be a written report which should not exceed 10 pages 1 ½ -spaced, excluding tables, charts and references. Bullet points are acceptable. It will amplify and support the material presented in class. This report will be handed in prior to the presentations on Friday, June 30.

Tentative Schedule

Day	Topic and Presentations	Readings	Deliverables
May 31	Introductions, overview of course, Introduction to Business Analytics and Lessons from Industry so far	None	None
June 2	Big Data – MIT Seminar, Discussion on readings, preliminary thoughts on managing the function	Davenport et al “How Big Data is Different”, Davenport Analytics 3.0”	Reading summaries, notes for in-class discussion
June 7	Data Scientists – who are they? How to recruit them? How to manage them?		Final presentation topics due
June 14	Data Governance, ethical issues, security and privacy Implications of the Internet of Things		
June 21	Managerial Implications from Data Technologies		
June 28	The CAO and The CDO Outsourcing the Chief Data Officer and Analytics Functions. Interview with Data Analyst	IBM “Insights for the New Chief Data Officer”, O’Regan “Chief analytics officer: The ultimate big data job?”	
June 30	Team Presentations		Final Presentations