



# THE OHIO STATE UNIVERSITY

## JOHN GLENN COLLEGE OF PUBLIC AFFAIRS

### Public Affairs 7570: Information Management

Autumn, 2015

#### Course Information

Class Number	Meeting Day	Meeting Time	Location
34209	Tuesday, Thursday	3:55-5:15	PA 040

#### Instructor

<b>Instructor:</b> David Landsbergen	<b>Office Hrs:</b> T, R 2-3 and by appointment
<b>Email:</b> <a href="mailto:landsbergen.1@osu.edu">landsbergen.1@osu.edu</a>	<b>Instructor Office:</b> 310F Page

#### Background

Data is now big. Data is now sexy. Data is now in the common parlance. Issues like the proper use of data by the NSA and law enforcement are discussed in the news and are the topics of hallway conversations. We repeatedly hear about yet another security breach where hackers have gained access to extremely valuable information because organizations have not managed their information well. On the positive side, we hear amazing stories, like "Moneyball", where information is used in new ways to detect problems or come up with creative solutions. As a society we are now becoming conscious of the power and the dangers of using data and information.

Data, and derivatively, information, and knowledge, have always been an important resource but it has up until now, only been important for a particular project with particular need. But in this new world, we now see information as central to better decision-making. Information is now viewed as an organizational, enterprise, or even social resource. For example, individual spreadsheets that hold precious contact

information are now being shared widely through Customer Relationship Management (CRM) systems. Data collected by a governmental agency about a student's dysfunctional family could be very useful to help a child do better in school. Unlike the economics of material goods, information becomes more valuable the more widely it is shared and used.

This new understanding of the importance of information is fundamentally changing how we manage it. For example, concerns about how money is managed have led to the creation of the Chief Financial Officer position. With the recognition of the critical difference that a workforce can have on an organization's future, we now manage "human capital". And now that data and information are seen as critical resources, Chief Information Officers have been created to help manage this core resource.

We are only at the beginning. The technology is screaming forward. The opportunities to use these technologies wisely are limited only by the "human technologies", the organization's ability to recognize the possibilities and implement robust information systems.

This class is useful for two kinds of professionals. As "informatization" increases, all professionals will either experience the effects of, or take part in decision-making on, information management questions. Professionals in this area include those who are part of the operations who may have to change how operations are conducted. It also includes professionals who are data analysts that will demand better information and managers who are the consumers of information and analysis.

The second kind of professional will play a active role in information management from when the data and information is first collected all the way up to making sure that the analysis is communicated to managers and executives. As automation increases and computers take over more responsibilities, there will be a high demand for people who have an "information-centric" world-view.

## **Course Objectives**

This course will equip you with ideas and tools to manage information. These concepts and tools will provide you with some very critical skills and concepts that will position you well as government and the larger society continues expand in how it uses information. More specifically, the course objectives include:

- The ability to explain why an explicit focus on information management is necessary to the effective functioning of public and nonprofit organizations.
- Possess the concepts and knowledge to identify new ways to use information for better managerial and policy outcomes:
  - Open Data
  - Big Data

- Citizen Engagement
- Performance Management / Benchmarking
- Be conversant with some of the unique policy and implementation issues in managing information:
  - Protecting Privacy
  - Minimizing Security Risks
  - Improving the Value of Information (VOI)
  - Transparency
  - Digital Divide
- Possess rudimentary skill in using some of the important tools in managing information:
  - Business Process Analysis / LEAN techniques
  - Meta-data
  - Relevant statutes and rules
  - Enterprise Architecture
  - Information quality management
  - Data Governance Plan

## Email Policy

Email is probably the best way to contact me. I will generally get back to you within 24 hours, at the latest (unless it is a weekend). If the question is one that would be useful to the class, I prefer that you post your question to the appropriate discussion board.

## Course Prerequisites

There are no prerequisites for the course.

## Course Materials

Students can access textbook information via the Barnes & Noble bookstore website: [www.shopOhioState.com](http://www.shopOhioState.com) as well as from their BuckeyeLink Student Center. This information is disseminated by B&N to all area bookstores. You may buy from a store of your choice and/or shop for books (always use ISBN# for searches) on line.

1. Newsom, Gavin and Lisa Dickey (2013). *Citizenville: How to Take the Town Square Digital and Reinvent Government*. ISBN-13: 978-0-14-312447-4. Paperback.

2. All other readings and course materials will be supplied by the instructor through our web page on <https://carmen.osu.edu>.

## Grading Scale

Letter Grade	Point Total
A	100-95
A-	94-90
B+	89-86
B	85-83
B-	82-80
C+	79-76
C	75-73
C-	72-70
D+	69-66
D	65-63
E	<63

## Grade Components

Points	Activity
10	Class Participation
45	Class Exercises
20	Midterm
25	Final Exam
<b>100</b>	<b>Total Points Possible</b>

## Class Participation

Points	Grade	Criteria
10-9	A	Student frequently participates in class
8-7	A-	Student periodically participates in class
6-5	B+	Student has participated in class
4-3	B	Student attends classes but never participates
2-0	B-	Student infrequently attends class

You can participate in class in many ways: 1) being prepared to answer questions during class discussion; 2) asking a question to clarify a point made during class discussion; 3) volunteering a similar personal experience to a case or concept discussed in class; 4) participating in on-line venues like discussion boards; 5) by posting your results to the appropriate section of the class discussion board; or 6) raising a question clarifying what we are supposed to be doing on an assignment.

## Class Assignments and Exercises

Many of the assignments and class exercises will have an individual component and a group component. Students will be expected to do some individual work that they will then bring to the group for further work. You will typically be asked to upload your individual work to a Carmen drop box and then use it to complete the group work portion of the assignment. Group work will also be uploaded to the appropriate Carmen drop box.

### 1. Developing a Business case for Using Information (10 points)

Our first assignment will begin our exploration of information management. You will be asked to pick an organization where better use of information could have prevented or solved a problem. You will then analyze how the information should be managed. Your first case study will provide raw material that may be useful in helping to understand some of the other information management issues covered later in the course. You will be asked to answer a set of structured question to help guide your analysis. This is strictly an individual assignment. No group work will be done.

## **2. Lean / Business Process Case Study (5 points)**

A useful metaphor in understanding information management is the notion of “information flows.” Information should be collected and routed to the right people at the right time. But sometimes these flows do not make sense or are inefficient. Sometimes, information is created but is routed to a dead-end; it is never used. Sometimes, these flows take far too many steps to get to the right person. Ideally, we should look at information flows from the time that the data is first collected until it is finally used in a decision.

In this case study, we will develop a rudimentary skill in describing existing flows and then making decisions on how to improve those flows. This is a very powerful skill that extends beyond information flows and has wider applicability in improving your general managerial skills.

## **3. Balancing Information Privacy against the Needs of an Organization to Use Information (5 points)**

A central theme of this course is the exploration of the tremendous opportunities in using information to gain policy insights and improve management. At the same time, this course will also explore the threats to privacy posed by Web 2.0 technologies. Obviously, there is a significant tension between these two very important ideas.

Successful public managers must be creative in how they balance these competing concerns as they manage information. This case study will provide an opportunity to practice these “balancing” skills on an important information management question.

## **4. Red Team / Blue Team (5 points)**

This assignment is a fun (and harmless way) to learn how to protect the security of an organization's information. “Red Teams” are used by computer people to test the robustness of their security systems. The mission of the Red Team is to try and find a way to breach an organization's defenses.

We are going to make it a game and have a Blue Team try to anticipate the clever ways that Red Team's will try to attack. If the Red team comes up with an attack for which the Blue Team has no defense, the Red Team wins. If the Red Team cannot break through the defenses, the Blue Team will win. Note: You do not need to be a programmer to enjoy this game because most successful security attacks begin with some kind of human error that can be addressed by using the appropriate management and policy tools.

## **5. Improving Information Quality (5 points)**

Information quality means more than freedom from error, it means making sure that we provide information in a way that is useful to a stakeholder. Certain stakeholders need to have timely information, others need to be provided context before the information can be useful. In this assignment, we will build upon a previous case study and do an information quality audit.

## **6. Using meta-data to manage information (15 points)**

As we move towards the end of the semester we begin to integrate some of the skills and ideas in the first part of the class. One of the more important tools we will use is meta-data. Meta-data is data about the data and in this assignment we will develop meta-data to help us manage information flow, security and privacy. There will be a set of three small products that will allow us to incrementally build a set of meta-data. Understanding meta-data sometimes takes a little more time to understand. The incremental building of the meta-data over five classes and the in-class support provided by both the instructor and guest instructor will facilitate the learning process.

## **Midterm and Final Examinations**

You are responsible for all material assigned, whether we cover that material in class or not. The material that is covered in class is usually the material that has historically been difficult to understand or it's just really, really important. Most of the exam material will, however, be based on the material that we cover in class. There will be some questions on the material that I do not cover in class, only because I am assuming that you can read the material and understand it. However, if you are somewhat vague about the material (like, "why is this important to know?"), please do ask in class. The only dumb question is the question that is not asked.

You will have the choice over whether you want to take the examination on a computer or would prefer to take the examination by writing out your answers.

The final examination is cumulative. It will be similar to the midterm examination.

**Wednesday, December 16, 4:00-5:45**

**Please notify me early in the semester if you have a scheduling conflict.**

## Grade Appeals

Grades on assignments are intended to reflect the overall quality of performance. You may appeal your grade on an assignment or exam if you think the grade does not reflect the quality of your performance. To appeal a grade, submit a clear written explanation describing why you believe the assigned grade is inappropriate within one week after your work is returned. I will carefully consider all such appeals. If I re-grade the assignment or examination, I will re-grade the entire assignment. As a result, the final grade may be greater than, less than, or equal to the original grade.

## Expectations

1. It is expected that students read the materials assigned before class. Readings are kept to a minimum so that you have the time to read and reflect on them before class.
2. We will be meeting in Page 040, which provides access to computing services. I selected Page 040 because the computers may be useful for quick research questions to support classroom discussion or our in-class work assignments.

At the same time, working on computers often poses a significant temptation to do some email, check football scores or drop in on Facebook. Indulging in that impulse is apparent to the instructor and to your peers and is very distracting. A continuing pattern of “checking out” during the class session will result in the loss of class participation points.

## Academic Integrity / Academic Misconduct Policy

<http://oaa.osu.edu/coamfaq.html> - [academicmisconductstatement](#)

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.

Failure to follow the rules and guidelines established in the University’s Code of Student Conduct may constitute “Academic Misconduct.” Sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the University.

In 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.

Other sources of information on academic misconduct (integrity) to which you can refer include:

***The Committee on Academic Misconduct web page:***

<http://oaa.osu.edu/coam.html>

***Ten Suggestions for Preserving Academic Integrity:***

<http://oaa.osu.edu/coamtensuggestions.html>

***Eight Cardinal Rules of Academic Integrity***

<http://www.northwestern.edu/uacc/8cards.html>

If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

## **Academic Support Services**

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know is suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the **Office of Student Life Counseling and Consultation Services (CCS)** by visiting [ccs.osu.edu](https://ccs.osu.edu) or calling 614-292- 5766. CCS is located on the 4th Floor of the Younkin Success Center and 4th Floor of the PAES Building. 24 hour emergency help is also available through the National 24/7 Prevention Hotline at 1-800-273-TALK or at [suicidepreventionlifeline.org](https://suicidepreventionlifeline.org)

## **Reasonable Accommodation Policy**

**Students with disabilities that have been certified by the Office for Disability Services will be appropriately accommodated, and should inform the instructor as soon as possible of their needs. The Office for Disability Services is located in 150 Pomerene Hall, 1760 Neil Avenue; telephone 292-3307; TDD 292-0901; <http://www.ods.ohio-state.edu/>.**

## Schedule

	<b>Date</b>	<b>Group</b>	<b>Readings / (#. Assignment) / [Guest Speakers]</b>
1	8/25	Introduction	Newsom, Intro and Chapter 1, (1. Developing a Business Case - Assigned)
2	8/27	Govt. 2.0	Newsom, 2-3; Garson - Theories of Change
3	9/1		Newsom, 4; O'Reilly
4	9/3		Newsom, 5-7
5	9/8		Newsom, 8; Garson, IT Success Factors
6	9/10		Sunlight Foundation Implementation; Stowers (In-class exercise to "score" open-data websites)
7	9/15	Govt. 2.0 Summarize	Newsom, 9-11; (1. Developing a Business Case - Due)
8	9/17	Data-driven DM	Simon; Tversky and Kahneman; Reno-Weber; Hammer
9	9/22		(2. Lean case study)
10	9/24		(2. Lean case study)
11	9/29		[Skype Discussion with Theresa Reno-Weber, Director, Louistat]
12	10/1	Big Data	Harris (Skim); Davenport; Mayer-Schoenburger, Chapter 1
13	10/6		Boyd; Landsbergen
14	10/8	<b>Mid-Term</b>	Essay question, Open book
15	10/13	Privacy	Garson, Chapter 6; State of Ohio Privacy Rules and Guidelines (Skim); Schneier
16	10/15	<b>Autumn Break</b>	
17	10/20		(3. Homelessness case study)
18	10/22	Security	Garson, Chapter 7
19	10/27		State of Ohio Security Rules and Guidelines (Skim)
20	10/29		(4. Red Team - Blue Team)
21	11/3	Information Quality	Redman; Eppler; Information Quality Dimensions
22	11/5		(5. Information Quality Audit)
23	11/10	Meta-Data	Primer on Meta-Data; NEIM; W3C; Semantic Web; (with "Dr. Jay" Ramanathan, Co-instructor)
24	11/12		(6. Using Meta-Data to Manage Information)
25	11/17		...
26	11/19		...
27	11/24		(6. Using Meta-Data to Manage Information)
28	11/26	<b>Thanksgiving</b>	
29	12/1	Data Gov. /EA	NASCIO, Data Governance I; NASCIO, IBM Data Governance Model; Lankhorst
30	12/3		Course Review
31	12/8		[Guest Speaker, Michael Hofherr, Chief Information Officer, Ohio State]

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