New York University – Robert F. Wagner Graduate School of Public Service

PADM-GP-4117:
Systems Thinking and Information Management in Client-Serving Organizations

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Spring 2015 Class Schedule
Thursday Jan 29 – Thursday March 12
8:35 – 10:15 pm
25 W. 4th St., Room C-13

Spring 2015 Office Hours:
Class Thursdays
7:15 – 8:15 pm
Puck Building, Room 3045

COURSE DESCRIPTION:

Managing data and information in human service, criminal justice and public health programs is fraught with complexity. This course will prepare students to participate constructively in decision-making regarding data management and information systems in client-serving organizations. Students will become familiar with:

- Perspectives about data typically associated with diverse stakeholder roles including: technologists, executive leadership, front-line workers and their supervisors, measurers of performance, evaluators, funders, and clients.
- The range of scenarios for acquiring information systems, and their challenges.
- Strengths and weaknesses of the competing methodologies for developing information systems; stages of and roles within information system projects; and factors that contribute to success or failure.
- The tiered structure of information systems and its implications for labor and financial cost.
- The complex of problems that client-serving agencies face around competing internal priorities, reporting to external funders, acquiring information systems, integrating data across multiple programs, and managing change.

The course teaches a set of practical techniques for looking under the hood of an information system and interpreting its data architecture in order to assess, and potentially enhance, the system’s ability to answer analytical questions from multiple stakeholder perspectives and to be modified as needed.

The course includes readings from the systems thinking traditions which are helpful for understanding the diverse ways of construing the boundaries and nature of the service environment; for understanding the virtues, limitations and pitfalls of common approaches to information system development; and for designing more effective, holistic and evolvable information systems.
COURSE REQUIREMENTS:

Assignments are due on the date stated. In order to be considered timely, assignments must be turned in electronically, preferably via the NYU Classes portal (rather than email) prior to class, or else turned in by hand (hard copy) during class. Any assignment that is not received by the end of class will be considered late. Late assignments will be docked by a half grade if received within 24 hours, and by a further half-grade after each further 24 hours.

Grading will be based on the following six assignments:
- **Three data architecture exercise sets (50%)**
  Two individual assignments @ 15% and one small group assignment @ 20%. Each set of exercises will employ techniques discussed in the readings and in class.
- **Three short essays on readings (50%)**
  Two individual assignments @ 15% and one small group assignment @ 20%. Each essay will respond to a set of the assigned readings.

BOOK:

Four chapters from *Images of Organization* by Gareth Morgan must be read for the assignment due in Session 2. The book is available in the bookstore. However, students are free to read from any earlier edition; used copies may be obtained online for a much lower price.

CALENDAR:

<table>
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<tr>
<th>Date</th>
<th>Session</th>
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<tr>
<td>1/29</td>
<td>Survey of the Landscape</td>
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| 2/5        | Client Information Systems – Acquisition, Creation and Structure  
             *Short Essay #1 Due* |
| 2/12       | System Modeling and Data Architecture  
             *Data Architecture Exercise Set #1 Due* |
| 2/19       | The Hidden Disciplines of Organizing Data  
             *Data Architecture Exercise Set #2 Due* |
| 2/26       | The Impact of Data Architecture – Case Examples  
             *Data Architecture Exercise Set #3 (Group Assignment) Due* |
| 3/5        | The Social Context of Information in Client-Serving Agencies  
             *Short Essay #2 Due* |
| 3/12       | Adopting a Systems Stance  
             *Short Essay #3 (Group Assignment) Due* |
SESSION DETAILS & READINGS:

SESSION 1: SURVEY OF THE LANDSCAPE

- Introductions.
- Course Goals and Expectations.
- The Landscape of Client-serving Organizations.
- Discussion of case study.

Topical Readings:
- Case study: The Washington County Human Service Information System Experience

Systems Readings:
- “Feedback” video of Stafford Beer

SESSION 2: CLIENT INFORMATION SYSTEMS – ACQUISITION, CREATION AND STRUCTURE

- Information Systems in Client-Serving Organizations
- The Development of Information Systems: Methodologies in Conflict
- Tiered Architecture and its Implications

Topical Readings:
- Selected short passages on software development methodology
- Manifesto for Agile Software Development (2001)
- Cockburn (2008), ‘Using Both Incremental and Iterative Development’, Crosstalk

Systems Readings:
### SESSION 3: SYSTEM MODELING AND DATA ARCHITECTURE

- Varieties of System Modeling
- Varieties of Data Modeling
- Deconstructing the CVT Data Model

**Topical Readings:**
- NPower (n.d), ‘Using flowcharts to map a service delivery process’
- D. Coursen, ‘Why & What Public Service Leaders Need to Know about Data Architecture’
- D. Dreher (2007), ‘Client Data Management: Collecting, Storing & Using Data’ Center for Victims of Torture
- Center for Victims of Torture (1997), ‘Data Model for Torture Treatment Centers’

### SESSION 4: THE HIDDEN DISCIPLINES OF ORGANIZING DATA

- Taxonomies
- Definitions
- Impact of Taxonomic & Definitional Issues on Data Architecture

**Topical Readings:**
- Selected short passages on data architecture.

**Systems Readings:**

### SESSION 5: THE IMPACT OF DATA ARCHITECTURE – CASE EXAMPLES

- The Information System Among the Stakeholders: Black Box vs. Alternatives
- Case Examples on the Continuum Between Success and Failure
- Building Information Systems from the Inside Out

**Topical Readings:**
- D. Coursen (2012) ‘Why Clarity and Holism Matter for Managing Human Service Information’ *Data Administration Newsletter*
- D. Coursen (2013) ‘Facing the Flexibility Problem in Human Service Information Systems’ *Data Administration Newsletter*
- D. Coursen (2012) ‘A Taxonomy of Barriers to Producing Performance Indicators on Human Service Programs’ *Data Administration Newsletter*
SESSION 6: THE SOCIAL CONTEXT OF INFORMATION IN CLIENT-SERVING AGENCIES

➢ Stakeholder Views: Overlaps and Disjunctions

Topical Readings:
➢ Other readings on performance measurement and data management TBA.

SESSION 7: ADOPTING A SYSTEMS STANCE

➢ Varieties of Panoramic System Views
➢ Synthesis: Good Practices for Managing Data in Client-Serving Agencies

Systems Readings:
➢ New York State Task Force on Juvenile Justice Indicators (2007) System Indicators for State and Local Planning – Executive Summary & Data Appendix