

*Knowledge is the thing that separates those with answers from those with opinions.*

## **POLS 4290 - Special Topics in Public Policy: Policy Informatics Fall 2014**

Course: POLS 4290, Section 0, CRN: 45642  
Title: Special Topics in Public Policy  
Class Schedule: T 2:00pm - 4:30pm  
Class Location: Fletcher 200  
Credit: 3  
Prerequisite: POLS 2000 or Department Head Approval  
Professor: Dr. Marcus D. Mauldin  
Office Location: Fletcher 417B  
Office Phone: 423-425-5702  
Office Hours: MW 11:00am-12:00pm; Tuesday 12:00pm - 1:30 and 4:45pm - 5:15pm  
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**Accommodation Statement:** If you are a student with a disability (e.g. physical, learning, psychiatric, vision, hearing, etc.) and think that you might need special assistance or a special accommodation in this class or any other class, call the Disability Resource Center (DRC) at 425-4006 or come by the office, 102 Frist Hall.

<http://www.utc.edu/Administration/DisabilityResourceCenter/>

**Personal Counseling:** If you find that personal problems, career indecision, study and time management difficulties, etc. are adversely affecting your successful progress at UTC, please contact the Counseling and Career Planning Center at 425-4438.

<http://www.utc.edu/Administration/CounselingAndCareerPlanning/>.

**Communication:** To enhance student services, the University uses your UTC email address for all communications. Please check your UTC email on a regular basis. If you have problems with accessing your UTC email account, contact the Call Center at 423-425-4000. The course Blackboard will also be used to communicate class-related issues.

### **Course Description**

Catalog Description: Selected topics in public policy

Policy informatics is both an emerging field of research and a community of practice focusing on: 1) advancing decision-making in the public sector through information-centric analysis of evidence that leverages computational and technological advances; and 2) designing, managing, and evaluating information systems and infrastructures for policy construction, analysis, and implementation. Policy informatics is the study of how computational and communication technology is leveraged to specifically understand and address complex public policy and administration problems and realize innovations in governance processes and institutions. It is built on the fundamental premise that information can be efficiently and effectively mobilized to enable evidence-driven policy design, implementation, and analysis in a legitimated governance

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environment. Policy informatics advances the goal of building public institutions that are transparent, collaborative, and participatory.

Although a relatively new discipline, three distinct research clusters are emerging in analysis, administration, and governance infrastructures. Research within the analysis cluster focuses on (a) harvesting data sets to generate evidence, (b) visualizing information and relationships between heterogeneous information sets, and (c) simulating and modeling complex environments to understand the efficacy of policy interventions and their associated outcomes.

Research within the administration cluster focuses on (a) understanding how the infusion of technology changes policy processes and the individual and group levels (b) infusing and provisioning information in and around administrative processes, and (c) leveraging the power of networks through technologies towards collaborative governance.

Research within the governance infrastructures cluster focuses on (a) building the next-generation of public institutions, (b) designing open, collaborative and participatory governance frameworks and platforms, (c) building participatory platforms to leverage collective intelligence, and (d) advancing the innovative capacity of public institutions with technology.

### **Course Objectives**

Upon successful completion of this course, students will be able to:

- Articulate the idea of policy informatics;
- Explain how informatics are used to promote policy design and implementation;
- Apply analytic methods to address policy questions; and
- Explicate the criticisms and challenges of informatics as a discipline and practice.

### **Required Texts and Documents**

Readings listed in this syllabus are available on the course Blackboard (Bb).

### **Other Recommended Items**

Laptop or external digital storage device.

### **Course Requirements**

***THIS COURSE IS NOT DESIGNED IN A LECTURE FORMAT.*** Students are expected to be full participants in shaping the character of the course. Your participation in classroom discussions and completion of assignments will help you achieve a deeper, richer understanding of policy informatics and its opportunities, challenges, and rewards. This requires all students to come to class prepared to discuss the readings and assignments for each session.

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Student performance will be evaluated as follows:

Informatics Foundation Paper:	100 points
Policy Research Paper:	100 points
Local Government Open Data Inventory:	50 points
City of Chattanooga Data Mining Project:	50 points
Mental Stimulation Exercises:	100 points (10 @ 10 points each)

**Important Dates**

- September 30<sup>th</sup> – Informatics Foundation Paper Due
- October 28<sup>th</sup>: Local Government Open Data Inventory Due
- November 11<sup>th</sup>: City of Chattanooga Data Mining Project Due
- December 6<sup>th</sup>: Policy Research Paper Due

**Think and Achieve: Critical Thinking**

Critical thinking is the habitual practice of raising questions, identifying problems, analyzing existing information, creating innovative solutions, and reflecting on the process and the product as a means of constant improvement.

**Honor Code Pledge (from the UTC Student Handbook)**

I pledge that I will neither give nor receive unauthorized aid on any test or assignment. I understand that plagiarism constitutes a serious instance of unauthorized aid. I further pledge that I exert every effort to insure that the Honor Code is upheld by others and that I will actively support the establishment and continuance of a campus-wide climate of honor and integrity.

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## **Course Schedule**

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DATE	TOPIC	READING ASSIGNMENT	ASSESSMENT/ACTIVITIES
August 19th	Course Introduction	Lasswell: "The Policy Orientation"	Mental Stimulation Exercise
August 26th	What is "Policy Informatics"?	Kamensky: "Policy Informatics is Bridging the Gap Between Researchers and Politicians"; Johnston and Kim: "Introduction to the Special Issue on Policy Informatics"; Gammack, Hobbs, and Pigott: "The Book of Informatics"	Mental Stimulation Exercise
September 2nd	Complexity and Public Policy	Homer-Dixon: "Complexity Science and Public Policy"; Green and Newth: "Towards a Theory of Everything? - Grand Challenges in Complexity and Informatics"; Meek: "Complexity Theory for Public Administration and Policy"	Mental Stimulation Exercise
September 9th	Complexity and Public Policy	OECD Global Science Forum: "Applications of Complexity Science for Public Policy"; Ozer and Seker: "Complexity Theory and Public Policy: A New Way to Put New Public Management and Governance in Perspective"	Mental Stimulation Exercise
September 16th	Data Driven Policy Decision Making/Analytics	Tsoukias, Montibeller, Lucertini, and Belton: "Policy Analytics: An Agenda for Research and Practice"; IBM: "Government Analytics for Dummies"; Bowen and Zwi: "Pathways to Evidence-Informed Policy and Practice: A Framework for Action"	Mental Stimulation Exercise
September 23rd	Data Driven Policy Decision Making/Analytics	Walters: "How Britain's Getting Public Policy Down to a Science"; Accenture: "How Analytics Can Shape Public Service for the Future"; Lomas and Brown: "Research and Advice Giving: A Functional View of Evidence-Informed Policy Advice in a Canadian Ministry of Health"; Corporate Partner Advisory Group: Leveraging Data Analytics in Federal Organizations;	Mental Stimulation Exercise
September 30th	Midterm/Data Science and Big Data/	Provost and Fawcett: "Data Science and its Relationship to Big Data and Data-Driven Decision Making"; Government Business Council: "Making Big Data Work for Government"	Informatics Foundation Paper Due
October 7th	Data Science and Big Data	BBC News: "Crime Fighting with Big Data Weapons" Eaton et al: "Understanding Big Data"-Chapters 1&2	Mental Stimulation Exercise
October 14th	Open Data	Open Knowledge Foundation: "Open Data Handbook"; Napoli and Karganis: "On Making Public Policy with Publicly Available Data: The Case of U.S. Communications Policymaking"; Bartling and Friesike: "Opening Science" - <i>Open Research Data: From Vision to Practice</i> , pg. 213 and <i>Challenges of Open Data in Medical Research</i> , pg. 297	Mental Stimulation Exercise
October 21st	Fall Break	None	None
October 28th	Open Data	Hendler et al: "U.S. Government Linked Open Data: Semantic.data.gov"; Kassen: "A Promising Phenomenon of Open Data: A Case Study of the Chicago Open Data Project"; Veljkovic et al: "Benchmarking Open Government: An Open Data Perspective"	Local Government Open Data Inventory
November 4th	Data Mining	Domingos and Hulten; "A General Framework for Mining Massive Data Streams"; Steihoff and Carnahan: "Smart Use of Data Mining"; DeRosa: "Data Mining and Data Analysis for Counterterrorism"	Mental Stimulation Exercise
November 11th	Data Mining	Popular Mechanics: "NSA Data Mining: How it Works"; Constitution Project: "Principles for Government Data Mining: Preserving Civil Liberties in the Information Age"	City of Chattanooga Data Mining Exercises
November 18th	Modeling and Visualization	Lindquist: "Grappling with Complex Policy Challenges: Exploring the Potential of Visualization for Analysis, Advising and Engagement"; Osimo and Mureddu: "Research Challenge on Visualization"; Kohlhammer et al: "Toward Visualization in Policy Modeling"	Introduction to GIS; SPSS and Excel in Visualization
November 25th	Modeling and Visualization	TBD	Mental Stimulation Exercise
December 6th	Final Exam: 1-3pm	Policy Research Paper Due	