Disciplinary Foundations for Information Studies

Spring 2015

INF 391D.12
Mondays, 12:00-2:45 pm
UTA 5.428

Instructor: Dr. Kenneth R. Fleischmann
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I. Official Course Description: An overview of concepts, results, and perspectives from philosophical, social science, humanistic, design, and technological disciplines that provide important underpinnings for Information Studies.

II. Detailed Course Description: This course explores the disciplinary foundations of our field, including humanities, social sciences, technical, and interdisciplinary fields. Each of these units will feature three specific (inter)disciplines. Each week, we will discuss the readings and the relationship between the focal (inter)discipline and information studies. Also, each week, a subject matter expert will join us as a guest discussant for the second half of the class.

III. Learning Objectives: By the end of this course, you will be able to:
- Explain the relationship between the information field and related (inter)disciplines.
- Integrate and synthesize concepts from the information field and related fields.
- Apply theories and methods from several different (inter)disciplines to your research.

IV. Tentative Course Schedule **This syllabus represents my current plans and objectives. As we go through the semester, those plans may need to change to enhance the class learning opportunity. Such changes, communicated clearly, are not unusual and should be expected.*

Date	Topic	Readings – to be completed <u>before</u> class	Guest Discussant
Week 1 **1/26**	**Introduction**	N/A (no readings before first class)	
		Unit I: Humanities	
Week 2 **2/2**	**Digital Humanities**	• Berry, D.M. (2011). The computational turn: Thinking about the digital humanities. *Culture Machine*, *11*, 1-22. • Borgman, C.L. (2009). The digital future is now: A call to action for the humanities. *Digital Humanities Quarterly*, *3*(4), 1-21. • Clement, T. (2014). The ear and the shunting yard: Meaning making as resonance in early information theory. *Information and Culture*, *49*, 401-426. • Svensson, P. (2012). Envisioning the digital humanities. *Digital Humanities Quarterly*, *6*(1), 1-33.	**Tanya Clement**

Week 3 2/9	**History**	• Aspray, W. (1999). Command and control, documentation, and library science: The origins of Information Science at the University of Pittsburgh. *IEEE Annals of the History of Computing*, *21*, 4-20. • Cortada, J.W. (2012). Shaping information history as an intellectual discipline. *Information and Culture*, *47*, 119-144. • Galloway, P. (2014). From archival management to archival enterprise to the information domain: David Gracy and the Development of Archival Education at the University of Texas. *Information and Culture*, *49*, 3-33. • Pawley, C. (2005). History in the library and information science curriculum: Outline of a debate. *Libraries and Culture*, *40*, 223-238.	**Ciaran Trace**
Week 4 2/16	**Philosophy**	• Brey, P. (2008). Do we have moral duties toward information objects? *Ethics and Information Technology*, *10*, 109-114. • Fallis, D. (2004). Epistemic value theory and information ethics. *Minds and Machines*, *14*, 101-117. • Floridi, L. (2002). What is the philosophy of information? *Metaphilosophy*, *33*, 123-145. • Winner, L. (1993). Upon opening the black box and finding it empty: Social constructivism and the philosophy of technology. *Science, Technology, and Human Values*, *18*, 362-378.	**Phil Doty**
		Unit II: Social Sciences	
Week 5 2/23	**Economics**	• Coiera, E. (2000). Information economics and the internet. *Journal of the American Medical Informatics Association*, *7*, 215-221. • Lerner, J., & Tirole, J. (2002). Some simple economics of open source. *The Journal of Industrial Economics*, *50*, 197-234. • Smith, V.K., Mansfield, C., & Klaiber, H.A. (2013). Terrorist threats, information disclosures, and consumer sovereignty. *Information Economics and Policy*, *25*, 225-234. • Stiglitz, J.E. (2000). The contributions of the economics of information to twentieth century economics. *The Quarterly Journal of Economics*, *115*, 1441-1478.	**James Howison**
Week 6 3/2	**Psychology**	• Dykas, M.J., & Cassidy, J. (2011). Attachment and the processing of social information across the life span: Theory and evidence. *Psychological Bulletin*, *137*, 19-46 • Olson, G.M., & Olson, J.S. (2003). Human-computer interaction: Psychological aspects of the human use of computing. *Annual Review of Psychology*, *54*, 491-516. • Schwartz, S.H. (2011). Studying values: Personal adventure, future directions. *Journal of Cross-Cultural Psychology*, *42*, 307-319. • Sweller, J. (2006). Natural information processing systems. *Evolutionary Psychology*, *4*, 434-458.	**Andrew Dillon**

Week 7 3/9	Education	• Çevik, Y.D., Çelik, S., & Haslaman, T. (2014). Teacher training through social networking platforms. *Australasian Journal of Educational Technology*, *30*, 714-727. • Chen, C.-M., & Lin, S.-T. (2014). Assessing effects of information architecture of digital libraries on supporting e-learning: A case study on the Digital Library of Nature & Culture. *Computers and Education*, *75*, 92-102. • Enyedy, N. (2003). Knowledge construction and collective practice: At the intersection of learning, talk, and social configurations in a computer-mediated mathematics classroom. *Journal of the Learning Sciences*, *12*, 361-407. • Wang, S.-K., Hsu, H.-Y., Reeves, T.C., & Coster, D.C. (2014). Professional development to enhance teachers' practices in using information and communication technologies as cognitive tools: Lessons learned from a design-based research study. *Computers and Education*, *79*, 101-115.	**Serkan Çelik**
		Unit III: Technical Fields	
Week 8 3/23	Human-Computer Interaction	• Bias, R.G., Marty, P.F., & Douglas, I. (2012). Usability/user-centered design in the iSchools: Justifying a teaching philosophy. *Journal of Education in Library and Information Science*, *53*, 274-289. • Friedman, B., Kahn, P. H., Jr., & Borning, A. (2006). Value sensitive design and information systems. In P. Zhang and D. Galletta (eds.), *Human-Computer Interaction in Management Information Systems: Foundations*. Armonk, NY: M.E. Sharpe, 348-372. • Gerlach, J.H., & Kuo, F.-Y. (1991). Understanding human-computer interaction for information systems design. *MIS Quarterly*, *15*, 527-549. • Lopatovska, I., & Arapakis, I. (2011). Theories, methods, and current research on emotions in library and information science, information retrieval, and human-computer interaction. *Information Processing and Management*, *47*, 575-592.	**Yan Zhang**
Week 9 3/30	Information Retrieval	• Cool, C., & Belkin, N. (2011). Interactive information retrieval: History and background. In I. Ruthven & D. Kelly (eds.), *Interactive information seeking, behaviour, and retrieval*. London: Facet Publishing, 1-14. • Oard, D.W. (2009). A whirlwind tour of automated language processing for the humanities and social sciences. In *Promoting Digital Scholarship: Formulating Research Challenges in the Humanities, Social Sciences, and Computation*, Council on Library and Information Resources, pp. 34-42. • Yang, K. (2005). Information retrieval on the web. *Annual Review of Information Science and Technology*, *39*, 33-80. • Zhang, Y. (2008). Undergraduate students' mental models of the web as an information retrieval system. *Journal of the American Society for Information Science and Technology*, *59*, 2087-2098.	**Doug Oard Emi Ishita**

Week 10 4/6	Machine Learning	• Batrinca, B., & Treleaven, P.C. (2014). Social media analytics: A survey of techniques, tools, and platforms. *AI and Society*, *30*, 89-116. • Ekbia, H.R. (2010). Fifty years of research in artificial intelligence. *Annual Review of Information Science and Technology*, *44*, 201-242. • Pennacchiotti, M., & Popescu, A.-M. (2011). A machine learning approach to Twitter user classification. *Proceedings of the Fifth International AAAI Conference on Weblogs and Social Media*, 281-288. • Wallace, B.C., Laws, M.B., Small, K., Wilson, I.B., & Trikalinos, T.A. (2014). Automatically annotating topics in transcripts of patient-provider interactions via machine learning. *Medical Decision Making*, *34*, 503-512.	**Byron Wallace**
Unit IV: Interdisciplinary Fields			
Week 11 4/13	Women's Studies	• Haraway, D. (2006). A cyborg manifesto: Science, technology, and socialist-feminism in the late 20th century. In J. Weiss et al. (eds.), *The International Handbook of Virtual Learning Environments*, 117-158. • Harding, S., & Norberg, K. (2005). New feminist approaches to social science methodologies: An introduction. *Signs: Journal of Women in Culture and Society*, *30*, 2009-2015. • Olson, H.A. (1997). The feminist and the emperor's new clothes: Feminist deconstruction as a critical methodology for library and information studies. *Library and Information Science Research*, *19*, 181-198. • Westbrook, L. (1997). Information access issues for interdisciplinary scholars: Results of a Delphi study on women's studies research. *The Journal of Academic Librarianship*, *23*, 211-216.	**Lynn Westbrook**
Week 12 4/20	Cultural Studies	• Alvermann, D.E. (2004). Media, information communication technologies, and youth literacies: A cultural studies perspective. *American Behavioral Scientist*, *48*, 78-83. • Nelson, C., Treichler, P.A., & Grossberg, L. (1992). Cultural studies: An introduction. In L. Grossberg, C. Nelson, and P.A. Treichler (eds.), *Cultural Studies*. New York: Routledge. • Webster, F. (2005). Making sense of the information age: Sociology and cultural studies. *Information, Communication, and Society*, *8*, 439-458. • Wiegand, W. (2003). To reposition a research agenda: What American studies can teach the LIS community about the library in the life of the user. *The Library Quarterly*, *73*, 369-382.	**Melanie Feinberg**

| Week 13 4/27 | Science and Technology Studies | • Edwards, P.N., Mayernik, M.S., Batcheller, A.L., Bowker, G.C., & Borgman, C.L. (2011). Science friction: Data, metadata, and collaboration. *Social Studies of Science*, *41*, 667-690.
• Martin, B. (In Press). Censorship and free speech in scientific controversies. *Science and Public Policy*.
• Star, S.L. (2010). This is not a boundary object: Reflections on the origin of a concept. *Science, Technology, and Human Values*, *35*, 601-617.
• Woolgar, S. (1991). The turn to technology in social studies of science. *Science, Technology, and Human Values*, *16*, 20-50. | Bo Xie |
| Week 14 5/4 | Present Papers | No Readings – Present Papers | |

V. Course Requirements

1. **Class attendance and participation policy**

   (a) Because the vast majority of the learning in this class will occur within the classroom, you are required to attend class regularly. Attendance will be taken during each class period. Absences will only be excused in situations following university policy (illness, religious holy days, participation in University activities at the request of university authorities, and compelling absences beyond your control) with proper documentation and timely notification (prior to class for non-emergencies). Excessive tardiness may be considered as an unexcused absence except in situations following university policy.

   (b) Class participation is a critical element of this course. The effectiveness of the course will be significantly impacted by the quality of your participation. Class participation is not merely attendance, but rather factors in your overall contributions to the collaborative learning environment, based on both the quantity and quality of your interactions in all aspects of the course. Discussion of class participation with the instructor is encouraged in order to ensure that you are making the most of the classroom experience and the accompanying opportunities for learning. You are expected to participate in all aspects of class discussion. You should come to class prepared to discuss the required readings, as well as your perspectives on these readings. You should strive for balance in your contributions, and your participation will not be based on who speaks the loudest or the longest, but on consistent participation of significant quantity and, most importantly, quality.

   (c) Your attendance and class participation grade will be calculated by multiplying the numerical assessment of your class participation by the percentage of classes that you attend (with exceptions made for documented, university-recognized absences as noted above). Please note that regular attendance and active participation in each class session are critical for receiving a good grade in this course. For example, by actively participating in each class, you will receive a full letter grade higher than if you were to skip half of the classes or to be half-awake for all of the classes.

2. Course Readings/Materials

(a) All course readings are available on the course Canvas site

(b) Please make sure to complete all readings before coming to class

(c) Please come to class ready to discuss the readings, including questions for discussion.

3. Research Paper

Throughout the semester, you will develop a research paper that explores a single concept across three distinct (inter)disciplines. You should select the concept and the disciplines in consultation with the instructor. You must select three distinct (inter)disciplines from three of the four units: humanities, social sciences, technical, interdisciplinary. You can either use (inter)disciplines from the course weeks or choose different (inter)disciplines in consultation with the instructor. For example, if you chose to write a research paper on human values, you could select philosophy (humanities), psychology (social sciences), and human-computer interaction (technical).

Paper Proposal: Please describe, in 200-250 words, your proposed research paper. Please make sure to introduce the concept, describe the three (inter)disciplinary lenses through which you will examine this concept, and your approach to writing the paper.

Paper Outline: Please provide an outline of your paper, including the introduction to the selected concept, a description of the literature that you will cover for each of the three fields, and a synthesis that integrates the various fields' approaches to the concept. The recommended format is either a bulleted list, with 3-6 bullets for each of the 5 sections, or paragraph-length descriptions of each of the 5 sections.

Paper Rough Draft: Your rough draft should include including the introduction to the selected concept, a description of the literature that you will cover for each of the three fields, and a synthesis that integrates the various fields' approaches to the concept. You may choose to what extent and in what ways you develop the paper; for example, you can provide half of your final paper or the complete paper with each section half written. However, for all omitted sections, please provide a description that is further developed from the outline. You may also use this as an opportunity to provide a complete draft of the paper, but this is not required. The rough draft length should be 1,500-5,000 words.

Final Paper: Your final paper should incorporate feedback from all previous stages of the paper development. Your paper should be complete, coherent, and easy to read. Please make sure to proofread your paper thoroughly prior to submission. The final paper length should be 3,000-5,000 words.

Final Presentation: Please prepare a 20-30 minute presentation of your paper that explains the goals of the paper, how you developed the paper, and the final product. Please send PowerPoint slides to the instructor prior to the final class meeting.

4. Late Assignment Policy

All assignments are due by the start of class for that week, except as noted in the course schedule. All assignments must be submitted via e-mail. Late assignments will only be excused in situations following university policy (illness, religious holy days, etc.) with proper documentation and timely notification (prior to the deadline for non-emergencies). In all other cases, assignments received after the deadline will be penalized 10% per 24-hour period. If you turn in an assignment (without prior authorization or extreme emergency circumstances) even one minute late, you will have an automatic deduction of 10% prior to grading of the assignment; if you are five days late, even an otherwise perfect assignment will only receive half-credit; and if you are ten days late, your assignment will not be graded and will not receive any credit.

VI. Grading Procedures

Grades will be based on:
- Attendance and Participation (30%)
- Research Paper (70%)
  - Paper Proposal: (5%), Week 4
  - Paper Outline: (10%), Week 7
  - Paper Rough Draft: (15%), Week 10
  - Final Paper: (25%), Week 14
  - Final Presentation: (15%), Week 14

Grading Scale:

		B+	87-89	C+	77-79	D+	67-69		
A	93-100	B	83-86	C	73-76	D	63-66	F	0-59
A-	90-92	B-	80-82	C-	70-72	D-	60-62		

VII. University Policies

Religious holy days: A student who misses classes or other required activities, including examinations, for the observance of a religious holy day should inform the instructor as far in advance of the absence as possible, so that arrangements can be made to complete an assignment within a reasonable time after the absence.

Use of E-mail for Official Correspondence: All students should become familiar with the University's official e-mail student notification policy. It is the student's responsibility to keep the University informed as to changes in his or her e-mail address. Students are expected to check e-mail on a frequent and regular basis in order to stay current with University-related communications, recognizing that certain communications may be time-critical. It is recommended that e-mail be checked daily, but at a minimum, twice per week. The complete text of this policy and instructions for updating your e-mail address are available at **http://www.utexas.edu/its/help/utmail/1564**

Documented Disability Statement: You will need to provide documentation to the Dean of Student's Office so the most appropriate accommodations can be determined. Specialized services are available on campus through Services for Students with Disabilities (SSB 4.104, 471-6259). Any student who requires special accommodations must obtain a letter that documents the disability from the Services for Students with Disabilities area of the Division of Diversity and Community Engagement (471-6259 voice or 471-4641 TTY for users who are deaf or hard of hearing). Present the letter to the professor at the beginning of the semester so that needed accommodations can be discussed. The student should remind the professor of any testing accommodations no later than five business days before an exam. For more information, visit http://www.utexas.edu/diversity/ddce/ssd/

Behavior Concerns Advice Line (BCAL): If you are worried about someone who is acting differently, you may use the Behavior Concerns Advice Line to discuss by phone your concerns about another individual's behavior. This service is provided through a partnership among the Office of the Dean of Students, the Counseling and Mental Health Center (CMHC), the Employee Assistance Program (EAP), and The University of Texas Police Department (UTPD). Call 512-232-5050 or visit http://www.utexas.edu/safety/bcal.

Emergency Evacuation Policy: Occupants of buildings on the UT Austin campus are required to evacuate and assemble outside when a fire alarm is activated or an announcement is made. Please be aware of the following policies regarding evacuation:
- Familiarize yourself with all exit doors of the classroom and the building. Remember that the nearest exit door may not be the one you used when you entered the building.
- If you require assistance to evacuate, inform me in writing during the first week of class.
- In the event of an evacuation, follow my instructions or those of class instructors.

Do not re-enter a building unless you are given instructions by the Austin Fire Department, the UT Austin Police Department, or the Fire Prevention Services office.

Policy on Scholastic Dishonesty: Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from the University. Since such dishonesty harms the individual, all students and the integrity of the University, policies on scholastic dishonesty will be strictly enforced. For further information, please visit the Student Judicial Services web site at http://deanofstudents.utexas.edu/sjs/

University of Texas Core Values and Honor Code: The core values of The University of Texas at Austin are learning, discovery, freedom, leadership, individual opportunity, and responsibility. Each member of the university is expected to uphold these values through integrity, honesty, trust, fairness, and respect toward peers and community. As a student of the University of Texas at Austin, I shall abide by πthe core values of the University and uphold academic integrity.