385T TECHNOLOGY AND WORK
Fall 2010
Mondays 9-12
UTA Bldg Rm 1.504

Professor Diane E. Bailey
diane.bailey@ischool.utexas.edu, UTA 5.438

TA George Royer
georgewroyer@yahoo.com

Who Should Take This Course
You should take this course if you want to learn about the role that information and communication technologies (ICTs) play in modern work. We’ll investigate how ICTs shape work and are shaped in turn by the individuals who use them. This knowledge is critical for understanding people’s reactions to new technologies at work; it is also essential for preparing for the radical transformations that often accompany technological change. The course involves substantial reading and discussion. You will also practice in class and carry out in the field qualitative fieldwork techniques for data collection (interviewing, observation), data analysis (coding, memoing), and study presentation (verbal, written). In short, the course offers a mix of individual study, in-class activities, individual or group presentations, fieldwork, original research, and class discussion that provides multiple ways for you to engage with the material.

LEARNING OUTCOMES
In addition to learning about the role that ICTs play in modern work, you will also
  - Learn to draw insights for the design of modern organizations and technologies
  - Gain skills in qualitative data collection, including interviewing and observation
  - Gain skills in qualitative data analysis, including coding of field notes and memoing
  - Practice and improve your teamwork skills, if you desire
  - Hone your presentation skills
  - Strengthen your research skills by reading and discussing studies in a body of literature
  - Develop your ability to bridge the gap between theory and practice by investigating and analyzing the role of ICTs in a current occupation

OVERVIEW
We will examine together the relationship between technology and work in the particular context of five cases. Three cases are contemporary: (1) diagnostic and surgical tools in medicine, (2) ICTs in geographically distributed work, and (3) ICTs in reference librarianship. One case is historical: (4) early automation and IT in offices. One case spans a century to provide both historical and contemporary lessons: (5) the moving assembly line in factories. You will investigate technology and work in a sixth setting: an information occupation of your choice. Through these cases we will come to understand why the study of work is essential for the design of ICTs and why an understanding of ICTs is critical for designing modern work and modern organizations.
COURSE POLICIES

Attendance and Participation
You are expected to attend every day and to have completed the reading and any assignments so that you can actively engage in discussions. Poor attendance and participation will lower your grade.

Grading
Individual component weights in final grade:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Book Verbal Presentation</td>
<td>15%</td>
<td>(individual)</td>
</tr>
<tr>
<td>Book Written Summary</td>
<td>20%</td>
<td>(individual)</td>
</tr>
<tr>
<td>Project Verbal Presentation I</td>
<td>15%</td>
<td>(individual or group)</td>
</tr>
<tr>
<td>Project Verbal Presentation II</td>
<td>25%</td>
<td>(individual or group)</td>
</tr>
<tr>
<td>Project Paper</td>
<td>25%</td>
<td>(individual)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td></td>
</tr>
</tbody>
</table>

Participation and attendance may shift a grade up or down.

Late Work Policy
Some work cannot be late because the class depends on your contribution on that day. Thus, verbal book presentations and verbal project presentations cannot be late; you will lose full credit if you are not ready when they are due. For your book written summary and your project research paper, you will lose 10% of your grade if you fail to hand them in when due. If the work is not handed in within 48 hours, you will lose another 10%. No summaries or papers will be accepted more than one week late.

University of Texas 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. Source: [http://www.utexas.edu/welcome/mission.html](http://www.utexas.edu/welcome/mission.html)

Documented Disability Statement
Any student with a documented disability who requires academic accommodations should contact Services for Students with Disabilities (SSD) at (512) 471-6259 (voice) or 1-866-329-3986 (video phone). Faculty are not required to provide accommodations without an official accommodation letter from SSD.

- Please notify me as quickly as possible if the material being presented in class is not accessible (e.g., instructional videos need captioning, course packets are not readable for proper alternative text conversion, etc.).
- Please notify me as early in the semester as possible if disability-related accommodations for field trips are required. Advanced notice will permit the arrangement of accommodations on the given day (e.g., transportation, site accessibility, etc.).
- Contact Services for Students with Disabilities at 471-6259 (voice) or 1-866-329-3986 (video phone) or reference SSD’s website for more disability-related information: [http://www.utexas.edu/diversity/ddce/ssd/for_cstudents.php](http://www.utexas.edu/diversity/ddce/ssd/for_cstudents.php)
REQUIRED COURSE MATERIALS

Texts (all students)
5. One of the following three books:
6. One additional book per student, see Book Presentation and Summary, below, for instructions and the list of texts at the end of the syllabus for selections.

Other Required Reading
Several journal articles are also required; in digital form, they are on the Blackboard website.

Video
One video is to be viewed outside of class; it is on reserve at the computer lab.

ASSIGNMENTS AND PROJECTS

Book Presentation and Summary
You will read one additional text over the course of the semester beyond the ones listed in the course schedule below. You will prepare a verbal presentation and a written summary of the book. The verbal presentation shall be no more than FIVE minutes in length, with no slides or handouts, and will be given in class during the appropriate week. The purpose of the verbal presentation of the book is to help your classmates better understand the week's topic by providing the major insights of the additional reading and situating those insights with respect to what the class read. The written summary of the book should be no more than five pages in length. The purpose of the written summary is to convey to me your ability to read new material and integrate it with our class readings in a way that extends your understanding of the topic. Your verbal presentation and written summary should include the main thesis of the book with an analysis of how the book complements or opposes other readings for the week. You must choose from among the texts listed at the end of the syllabus unless I approve an alternative text of your choice.
Project: Study of a Particular Occupation of Your Choice

You will work alone or in small groups to research an occupation of your choice. Your goal is to develop a rich, thorough depiction and analysis of ICTs and work in the context of this occupation. Plotting the course of work and technology over time, thus providing historical as well as modern-day accounts to trace change, would be one good strategy, but not the only one. I expect you to learn about the occupation through interviews, site visits, observations, newspaper articles, movies, books or other sources. We will discuss in class my expectations of the amount of field data you should gather based on group size.

You will verbally present your preliminary findings and pose a question to the class in class October 25th. You will do your final presentation November 15th or 22nd. You will submit a paper the last day of class.

Project Verbal Presentation I. This verbal presentation may feature Powerpoint slides, videos, and other media as appropriate to convey your preliminary findings. The purpose of this presentation is to let us know where you stand and for you to seek our advice for any problems you may be experiencing as you think about your data. Although this is a “working” session, I expect a polished, not incomplete or rough, presentation aimed at helping us understand your data well enough to offer valuable help. If you worked in a group, this is a group presentation, with all members speaking for nearly equal durations.

Project Verbal Presentation II. This verbal presentation may feature Powerpoint slides, videos, and other media as appropriate to convey your findings. I value creativity, clarity, logical progression of ideas, helpful visual aids, depth of thought, and thoroughness of research. The purpose of the presentation is to provide the class with an informed, in-depth understanding of the role of ICTs in the occupation you studied. If you worked in a group, this is a group presentation, with all members speaking for nearly equal durations.

Project Paper. Papers – roughly 3,000 words minimum, excluding references – should evince rigor in data collection and analysis and should follow formal standards of writing, not journalistic, web-based or otherwise casual or informal standards. The purpose of the written paper is to convey to me your ability to interpret and apply the knowledge of technology and work that you gained in this class in the context of the occupation that you studied. Please do not attempt to write a paper that discusses the specific application of all the material covered in this course, as that effort will quite likely exhaust both of us. Even if you worked in a group, this is an individual paper and should not share its text in whole or in part with the papers of your teammates.
CLASS SCHEDULE

Week 1 Monday 8/30

Introduction
What is technology? What are information and communication technologies (ICTs)? What is work? Examples of technology at work. Outdated notions of technology and work. Discussion of syllabus. Getting to know each other and brainstorming occupations for your course project.

Reading: Barley and Kunda, Bringing Work Back In (Blackboard)
Discussion: How does work shape us, what does it mean to us? What images of work did we garner in childhood from parents and others? What role has technology played in shaping our image of workers? For example, do you have higher status if you work with technology that is advanced as compared with people who work with basic or low-end technologies?
In-Class Assignment. You will select your choice of text for presentation and summary.

Week 2 Monday 9/6
LABOR DAY HOLIDAY

Week 3 Monday 9/13

Case 1: Diagnostic and Surgical Tools in Medicine

Studies of the introduction of new technologies for diagnosis and surgery in medicine highlight how differences in the implementation of a technology may occasion different effects on occupational roles, occupational status, and the social dynamics of work. New technologies also have the potential to drastically alter the global distribution of the medical workforce via the transmission of digital artifacts.

Reading: Edmondson et al., Disrupted Routines (Blackboard)
Levy and Goelman, Offshoring and Radiology (Blackboard)
Stack et al., The Offshoring of Radiology (Blackboard)
Jarvis and Stanberry, Teleradiology: Threat or Opportunity? (Blackboard)
McLean and Richards, Teleradiology: A Case Study (Blackboard)

Presentation: Selected student presentations of additional reading.
Discussion: What does the work of Edmondson and her colleagues tell us with respect to technological determinism? What lessons about implementation do we gain? Why is teleradiology possible? What are its implications for radiologists, physicians who treat patients, and patients?
**Week 4 Monday 9/20**

**Basic Qualitative Data Collection Techniques in Interviewing and Observation**

We’ll cover what you need to know to collect the empirical data for your class project. In addition to covering techniques for effective interviewing and observing of informants, we will also discuss ethical issues in qualitative data collection as well as technological aids and choices in the field.

*Reading*: Emerson et al, *Writing Ethnographic Fieldnotes*, chapters 3-4  
*Weiss, Learning from Strangers*, chapters 3-4

*Exercise*: We’ll practice in pairs to get you comfortable with the mechanics of interviewing and observation.

---

**Week 5 Monday 9/27**

**Case 2: Moving Assembly Line – Origin and Early Implementation**

The transformation of production work in the first half of the twentieth century: Taylor and efficiency, Ford and the technology of the moving assembly line, the rationalization of work, automation, outcomes for work and workers, including task cycles, alienation and job satisfaction.

*Exercise*: Time Study Example and Therblig Analysis Tool  
*Presentation*: Selected student presentations of additional reading.  
*Reading*: Braverman, Chapters 1-5

---

**Week 6 Monday 10/4**

**Case 2 (cont’d): Moving Assembly Line – Updated Implementations**


*Reading*: Hamper, *Rivethead*  
*Video*: PRIOR to class, view *Modern Times* (on reserve at the computer lab)  
*Presentation*: Selected student presentations of additional reading.  
*Discussion*: See questions on Blackboard for in-class comparison of book and movie.
Week 7 Monday 10/11

Basic Qualitative Data Analysis Techniques

We’ll cover what you need to know to analyze the empirical data you are collecting for your class project, including how to code your field notes and transcripts, how to identify themes, how to ensure consistency in coding, and how to combat salience by establishing frequency.

Reading: Barley, Technicians in the Workplace (Blackboard)
Emerson et al, Writing Ethnographic Fieldnotes, chapter 6
Exercise: Bring in at least one sample of an interview or observation that you or your team has completed to date, with copies for each person in your group. We will begin analysis on it.

Week 8 Monday 10/18

Case 3: ICTs in Reference Librarianship

Electronic databases, chat systems, IM and a host of other ICTs have transformed the work of reference librarians. Presentation of work by UT iSchool students who have been investigating reference work.

Reading: Sample of Fieldnotes (Blackboard)
Childers, The Future of Reference (Blackboard)
Harmeyer, Reviving the Reference Interview (Blackboard)
Lynch, Reference Interviews (Blackboard)
Zanin-Yost, Digital Reference (Blackboard)

Presentation: Selected student presentations of additional reading.
Discussion: What positive changes have occurred in the wake of advanced ICTs in this field? What negative changes have occurred and how they be mitigated?

Week 9 Monday 10/25

Presentation of Preliminary Findings and Puzzles (Verbal Presentation I)

Each group will briefly present what they have found thus far, what puzzles or challenges they face, what themes they suspect are in their data. Each group should come with at least one question for the class in terms of a request to help frame an issue, select the most interesting avenue among several options, resolve a methodological dilemma, or some similar problem. Class will provide comments.
Week 10 Monday 11/1

Case 4: Early Automation and IT in Office Work

Technological change and the transformation of clerical and white-collar work. Early offices, impact of office automation prior to introduction of IT, effect of IT, impact of scientific management.

**Reading:** Braverman, Part IV  
Zuboff, Chapters 3-4

**Presentation:** Selected student presentations of additional reading.

**Discussion:** How do workers in Zuboff’s dental offices respond to new technologies? What are managers trying to achieve with the new technologies? What do these scholars tell us about technology, authority and control and how these factors differ by blue-versus white-collar work?

Week 11 Monday 11/8

Case 5: Geographically Distributed Work

What happens when some individuals work from home or other locations outside the main office. Problems in visibility, isolation, managerial concerns, promotion, social networking, and work-family balance. What happens when people work in teams across time and space. Problems in technology-mediated communication, mutual knowledge, and cross-cultural differences.

**Reading:** Bailey and Kurland (Blackboard)  
Golden, Co-workers Who Telework (Blackboard)  
Cramton, Mutual Knowledge (Blackboard)  
Jarvenpaa and Leidner, Communication and Trust (Blackboard)

**Presentation:** Selected student presentations of additional reading.

**Discussion:** What do managers fear in telework? What do employees fear in it? Why do most people who telework fail to do so full-time? Why do organizations favor virtual teams? Will new technologies solve the problems inherent on such teams? Will new managerial and team leader practices do so? How do the lives of workers change when they work on virtual teams?
Weeks 12 & 13 Mondays 11/15 & 11/22

Presentation of Findings and Conclusions (Verbal Presentation II)

Each group will briefly present their findings and conclusions regarding ICTs and your chosen occupation.

Week 14 Monday 11/29

Summing Up: The Future of Technology and Work

With computers ubiquitous in the workplace and ICTs connecting distant sites with ease, what does the future hold for American workers and for the global workforce?

Reading: Read one of the following books:

Discussion: Futurists tend to paint a bleak picture for the future of work in the face of technological advance. Reflecting on what we have learned this semester, consider why futurists’ predictions might prove false and what hope there may be for American (and global) workers in the face of new technologies in the workplace.

Due: Project paper on occupation that you studied.
TEXTS FOR BOOK VERBAL PRESENTATIONS AND WRITTEN SUMMARIES

Diagnostic and Surgical Tools in Medicine

Moving Assembly Line – Origin and Early Implementation

Moving Assembly Line – Updated Implementations

Reference Librarianship
- And one you’ll have to wait for: Zabel, Diane. (expected Dec 2010). *Reference Reborn: Breathing New Life into Public Services Librarianship*. Libraries Unlimited: Santa Barbara, CA.
INF385T Tech & Work Syllabus

Early Automation and IT in Office Work

Geographically Distributed Work