INF 397C: Understanding Research

Unique number: 27710
Semester: Spring 2019
Class time: Monday, 9:00-12:00PM
Classroom: UTA 1.208

Instructor: Yan Zhang, Ph.D.
Office: UTA 5.416
Office hrs: Monday 12:00-1:00PM; By appointment other times
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Email: yanz@ischool.utexas.edu

1. Course description

Research approaches; research methods in a variety of information environments; research design; research results interpretation; analysis of published research.

2. Course objectives

This course introduces basic knowledge about conducting research in information science and provides students opportunities to experience research processes. Upon satisfactory completion of the course, the student will:

- understand the basic process of empirical research and research design
- understand various research methods used in information science research
- understand the relationships between research questions and research methods
- understand various techniques for data collection and data analysis
- be able to describe and compare various methods and techniques
- be able to evaluate and critique research designs (serve the role as a peer or referee)
- be able to produce research plans and research proposals (required for thesis students)

3. Texts

3.1 Required texts

Punch, Keith F. (2014). *Introduction to Social Research: Quantitative and Qualitative Approaches*. 3rd. Thousand Oaks: Sage.

Holtzblatt, K., & Beyer, H. (2017). *Contextual Design: design for life* (Second edition). Amsterdam: Morgan Kaufmann. [Digital book available at UT library]

Additional readings will be posted on Canvas (http://canvas.utexas.edu/).

3.2 Recommended texts

Wildemuth, B. M. (2017). *Applications of Social Research Methods to Questions in Information and Library Science*: Libraries Unlimited.

Singleton, R. A., & Straits, B. C. (2009). *Approaches to Social Research* (5 ed.): Oxford University Press, USA.

4. Policies

4.1 Policies concerning assignments

- Assignments must be submitted by midnight (11:59PM) on the due date.
- In fairness to students who turn in assignments on time, all late papers will be penalized by lowering the earned grade one grade level (e.g., from A- to B+; from B to B-) for each day that the assignment is late.
- No assignment submitted more than one week after the due date will be accepted.
- These penalties will not apply to students who know in advance that they will be submitting an assignment late, and let me know in advance. "In advance" means up until 24 hours before the class session in which the assignment is due.

4.2 Policies on class attendance and participation

- Reading assignments must be done before class so that you can ask questions and participate in discussions in class.
- You must participate in class discussions. In-class discussions and activities play an important role in this class. Extensive participation in class discussion will be an essential element of your learning success on the subject of understanding and serving users. Active involvement in learning increases what is remembered, how well it is assimilated, and how the learning is used in new situations. Class participation will be graded as part of your final grade.
- Attending each class is highly recommended. If you know in advance that you must miss a class, let me know in advance (up until 24 hours before the class session).
- If you miss a class session, unexpectedly, get in contact with me or the TA ASAP.

UT honor code applies in this class. Academic dishonesty, such as plagiarism, cheating, or academic fraud, will not be tolerated in this class. Please refer to the UT General Information Bulletin, Appendix C, Sections 11-304 and 11-802 for more information.

The instructor is happy to provide all appropriate accommodations for qualified students with documented disabilities. The University's Office of the Dean of Students at 471.6259, 471.4641 YYT, can provide further information and referrals as necessary.

The instructor reserves the right to make revisions or amendments to the syllabus as the semester progresses (to improve the class or to respond to unexpected events). Direct email messages will inform students about changes in the course schedule, readings, discussion questions, and so on.

5. Grading

In the School of Information, the following guidelines are followed in grading:

A	4.00	Excellent. High degree of mastery of the course material.
A-	3.67	Very good.
B+	3.33	More than satisfactory.
B	3.00	Satisfactory. Work consistent with academic expectations of graduate students.
B-	2.67	Less than satisfactory.
C+	2.33	Unsatisfactory. May indicate the instructor's reservations about the student's ability to meet the iSchool's academic requirements.
C	2.00	Unsatisfactory. Indicates the instructor's reservations about the student's ability to meet the iSchool's academic requirements.
C-	1.67	Unsatisfactory. Indicates the instructor's strong reservations about the student's ability to meet the iSchool's academic requirements. Any course with a grade lower than C cannot be counted toward a student's degree.
D	1.00	Unacceptable. Indicates the instructor's very strong reservations about the student's ability to meet the iSchool's academic requirements and to earn a graduate degree. Any course with a grade lower than C cannot be counted toward a student's degree.
F	0.00	Failing.

Semester grades will be computed as follows:
A = 94-100; A- = 90-93
B+ = 87-89; B = 84-86; B- = 80-83
C+ = 77-79; C = 74-76; C- = 70-73
D = 60-69
F = anything below 59

5.3 Grading rubric for presentations in the class

For all your presentations in this class (topic presentations and final project presentations), you are encouraged to use Powerpoint or some other presentation program (such as Open Office or Lotus Symphony). The grading rubric for the presentation is listed below (Note: This rubric was developed by Information Technology Evaluation Services, NC Department of Public Instruction. However, it was slightly modified for our purposes.)

Organization	
Unacceptable	Audience cannot understand presentation because there is no sequence of information
Acceptable	Audience has difficulty following presentation because presenter jumps around
Good	Presenter presents information in logical sequence which audience can follow
Excellent	Presenter presents information in logical, interesting sequence which audience can follow
Subject Knowledge	
Unacceptable	Presenter does not have grasp of information; presenter cannot answer questions about subject
Acceptable	Presenter is uncomfortable with information and is able to answer only rudimentary questions
Good	Presenter is at ease with expected answers to all questions, but fails to elaborate
Excellent	Presenter demonstrates full knowledge (more than required) by answering all class questions with explanations and elaboration
Graphics	
Unacceptable	Presenter uses superfluous graphics or no graphics
Acceptable	Presenter occasionally uses graphics that rarely support text and presentation
Good	Presenter's graphics relate to text and presentation
Excellent	Presenter's graphics explain and reinforce screen text and presentation
Spelling & Grammar	
Unacceptable	Presenter's presentation has more than one misspelling and more than one grammatical error
Acceptable	Presentation has exactly one misspelling and/or exactly one grammatical error, which a spell- or grammar checker would catch
Good	Presentation has exactly one misspelling and exactly one grammatical error, which a spell- or grammar checker would not catch
Excellent	Presentation has no misspellings or grammatical errors
Eye Contact	
Unacceptable	Presenter reads all of report with no eye contact
Acceptable	Presenter occasionally makes eye contact, but still reads most of report
Good	Presenter maintains eye contact most of the time but frequently returns to notes
Excellent	Presenter maintains eye contact with audience, seldom returning to notes
Elocution	
Unacceptable	Presenter mumbles, incorrectly pronounces terms, and speaks too quietly for audience in the back of room to hear
Acceptable	Presenter's voice is low. Presenter incorrectly pronounces terms. Audience members have difficulty hearing presentation.
Good	Presenter's voice is clear. Presenter pronounces most words correctly. Most audience members can hear presentation.
Excellent	Presenter uses a clear voice and correct, precise pronunciation of terms so that all audience members can hear presentation.

6. Assignments

6.1 Overview
This is an overview of the assignments for this course:

	Assignment	Format	Points
1	Class attendance and participate in class discussion	Individual	15
2	Human Subjects Certificate	Individual	5
3	Class presentation on the topic of contextual inquiry	Group	20
4	Group project	Group	
1)	Identify research problem		5
2)	Design a one-page research plan		10
3)	Design research protocols		15
4)	Collect data		10
5)	Analyze data		10
6)	Present your project		10
			100

6.2 Descriptions of each assignment

1. Class attendance and participation in class discussion

Students are required to physically attend each class and arrive at each class promptly. Class attendance will be graded as part of your final grade. If you know in advance that you must miss a class, let me know in advance (up until 24 hours before the class session). If you miss a class session, unexpectedly, get in contact with me ASAP.

Class participation will also be graded as part of your final grade. For each class, we will have an in-class discussion of the assigned readings. Every student is expected to actively participate in the discussion. In addition, over the course of the class, we will have discussions about your group projects.

2. Human subject certificate

The University of Texas at Austin requires faculty, staff, and students who are or will be involved in the conduct of human subject research to complete human subjects research training, financial conflicts of interest training, and to submit a financial interest disclosure form. IRB approval will not be provided if these requirements are not met. Detailed information about the training and instructions to complete it can be found here: https://research.utexas.edu/ors/human-subjects/training/

3. Class presentation on the topic of contextual inquiry

Form a group of 2-3 and select one of the topics listed in the table below to present in the class. The chapters are from the book listed below. The full text is available digitally in the UT library.

Holtzblatt, K., & Beyer, H. (2017). *Contextual Design: design for life* (2nd edition). Amsterdam: Morgan Kaufmann.

	Date	Topic	Presenters
1	Feb 25	Gathering user data (Chap 1, 2)	
2	Mar 4	Gathering user data (Chap 3, 4)	
3	Mar 11	Revealing the world (Chap 5, 6, 8)	
4	Mar 25	Revealing the world (Chap 7)	
5	April 8	Reinventing life (Chap 9, 10, 11)	
6	April 15	Defining the product (Chap 12-15)	
7	April 22	Making it real (Chapter 16-18)	

4. Group project

The group project is a design project. Students will: (1) identify a real-life problem that you are interested to address, (2) design a contextual inquiry strategy to study/investigate the problem, (3) execute your research strategies to collect data (on a lighter scale than proposed), and (4) analyze the data that you collect to inform your solution design. The final product of the project is a coherent report that outlines your research problem, methods of inquiry, research results, and implications for your actual design of your solutions (note: not the final solution). Each group could consist of three to four students. The specifications of this assignment are:

1) Identify the problem that your group wants to address

Based on your interest and your experience, do a preliminary literature search and reading to identify a problem (better, a real-life problem) that you want to address by designing new solutions (which could be training materials, an app, a brochure, an interface, or a product).

2) Plan a contextual inquiry strategy to investigate the problem

Design your contextual inquiry strategy, including methods that you will use (e.g., interviews, observation, document analysis, and so on), participants (if needed) that you will recruit, and research settings. **Turning in a one-page proposal** (research plan), outlining these elements using a bulleted list or table, and we will discuss your research plans in class.

3) Design specific research protocols

Based on the methods that you propose in your research plan, design specific research protocols (e.g., interview guidelines, survey questionnaires, or documents to be analyzed) to facilitate your research.

4) Perform your research based on your research plan and research protocols (data collection)

The data collection could be light weight. For example, instead of interviewing 20 people as you proposed in your research plan, you can recruit and interview two participants; instead of conducting 15 observations as proposed, you can conduct two.

5) Analyze the data you collect (data analysis)

Transcribe the interviews and analyze the interview to answer your research questions.

6) Present your project (final presentation)

Present your research in class. The presentation is about 20 minutes long, with additional five minutes for Q&A.

7. Schedule & Readings

7.1 Schedule

	Date	Subject	Due…
1	Jan 28	Introduction & Research goals, research questions, data	
2	Feb 4	Research approaches and research design (Qualitative, quantitative, and mixed methods)	
3	Feb 11	Collecting data (qualitative and quantitative)	Identify research problem
4	Feb 18	Analyzing data (qualitative and quantitative)	
5	Feb 25	Contextual design – Gathering user data (Chap 1, 2)	Design a research plan (one-page)
6	Mar 4	Contextual design – Gathering user data (Chap 3, 4)	
7	Mar 11	Contextual design – Revealing the world (Chap 5, 6, 8)	Design research protocols
8	Mar 18	** Spring Break, no class**	Human subject certificate
9	Mar 25	Contextual design – Revealing the world (Chap 7)	
10	Apr 1	**Instructor at iConference, no class**	
11	April 8	Contextual design – Reinventing life (Chap 9, 10, 11)	Complete data collection
12	April 15	Contextual design – Defining the product (Chap 12-15)	
13	April 22	Contextual design – Making it real (Chapter 16-18)	Complete data analysis
14	April 29	Working session- Tie everything together	
15	May 6	Final presentation	Final presentation

7.2 Readings

1. Jan 28   Introduction & Research goals, research questions, data

Readings
Punch, Chapter 4, 5, & 6

[Note: Scan these two papers. We will focus on examining how the RQs and hypotheses were derived, but not on the specific content]
Rieh, S. Y. (2004). On the Web at home: Information seeking and Web searching in the home environment. *Journal of the American Society for Information Science and Technology, 55*(8), 743-753.

Han, J. Y., Wise, M., Kim, E., Pingree, R., Hawkins, R. P., Pingree, S., . . . Gustafson, D. H. (2010). Factors Associated with Use of Interactive Cancer Communication System: An Application of the Comprehensive Model of Information Seeking. *Journal of computer-mediated communication, 15*(3), 367-388.

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2. Feb 4   Research approach and research design

Readings
Punch, Chapter 1, 7, & 10

Wang, Peiling (1999). Methodologies and methods for user behavioral research. Williams, Martha E., Ed. Annual review of information science and technology. Medford, NJ: Information Today, pp. 53-99.

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3. Feb 11   Collecting data

Readings
Punch, Chapter 8, 11

Wang, Peiling (1999). Methodologies and methods for user behavioral research. Williams, Martha E., Ed. Annual review of information science and technology. Medford, NJ: Information Today, pp. 53-99.

[Read the following two papers, focusing on data collection methods]
Rieh, S. Y. (2004). On the Web at home: Information seeking and Web searching in the home environment. *Journal of the American Society for Information Science and Technology, 55*(8), 743-753.

Han, J. Y., Wise, M., Kim, E., Pingree, R., Hawkins, R. P., Pingree, S., . . . Gustafson, D. H. (2010). Factors Associated with Use of Interactive Cancer Communication System: An Application of the Comprehensive Model of Information Seeking. Journal of computer-mediated communication, 15(3), 367-388. [Read page 1-6: RQ vs. hypotheses]

4. Feb 18   Analyzing data **<u>Readings</u>** Punch, Chapter 9, 12 *[Note: Read these two papers, focusing on data analysis]* Rieh, S. Y. (2004). On the Web at home: Information seeking and Web searching in the home environment. *Journal of the American Society for Information Science and Technology, 55*(8), 743-753. Han, J. Y., Wise, M., Kim, E., Pingree, R., Hawkins, R. P., Pingree, S., . . . Gustafson, D. H. (2010). Factors Associated with Use of Interactive Cancer Communication System: An Application of the Comprehensive Model of Information Seeking. *Journal of computer-mediated communication, 15*(3), 367-388.
5. Feb 25   Contextual design – Gathering user data (Chap 1, 2) **<u>Readings</u>** H&B, Chapter 1, 2
6. March 4   Contextual design – Gathering user data (Chap 3, 4) **<u>Readings</u>** H&B, Chapter 3, 4
7. March 11   Contextual design – Revealing the world (Chap 5, 6, 8) **<u>Readings</u>** H&B, Chapter 5, 6, 8
8. March 12   ** Spring break, no class**
9. March 25   Contextual design – Revealing the world (Chap 7) **<u>Readings</u>** H&B, Chapter 7
10. April 1   **iConference, no class**
11. April 8   Contextual design – Reinventing life (Chap 9, 10, 11) **<u>Readings</u>** H&B, Chapter 9, 10, 11
12. April 15   Contextual design – Defining the product (Chap 12-15)

Readings H&B, Chapter 12-15
13. April 22   Contextual design – Making it real (Chapter 16-18) **Readings** H&B, Chapter 16-18
14. April 29   Working session- Tie everything together
15. May 6   Final project presentation

8. University Resources for Students

The university has numerous resources that support your learning, use them to help you succeed in classes.

The Sanger Learning Center

Did you know that more than one-third of UT undergraduate students use the Sanger Learning Center each year to improve their academic performance? All students are welcome to take advantage of Sanger Center's classes and workshops, private learning specialist appointments, peer academic coaching, and tutoring for more than 70 courses in 15 different subject areas. For more information, please visit http://www.utexas.edu/ugs/slc or call 512-471-3614 (JES A332).

The University Writing Center

The University Writing Center offers free, individualized, expert help with writing for any UT student, by appointment or on a drop-in basis. Consultants help students develop strategies to improve their writing. The assistance we provide is intended to foster students' resourcefulness and self-reliance. http://uwc.utexas.edu/

Counseling and Mental Health Center

The Counseling and Mental Health Center (CMHC) provides counseling, psychiatric, consultation, and prevention services that facilitate students' academic and life goals and enhance their personal growth and well-being. http://cmhc.utexas.edu/

Student Emergency Services

http://deanofstudents.utexas.edu/emergency/

ITS

Need help with technology? http://www.utexas.edu/its/

Libraries

Need help searching for information? http://www.lib.utexas.edu/

Canvas

Canvas help is available 24/7 at https://utexas.instructure.com/courses/633028/pages/student-tutorials

Important Safety Information

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.

Evacuation Information

The following recommendations regarding emergency evacuation from the Office of Campus Safety and Security, 512-471-5767, http://www.utexas.edu/safety/

Occupants of buildings on The University of Texas at Austin campus are required to evacuate buildings when an alarm or alert is activated. Alarm activation or announcement requires exiting and assembling outside, unless told otherwise by an official representative.

- If campus is closed, or if the building is locked down, class is automatically cancelled; please stay safe.

- Familiarize yourself with all exit doors. Remember that the nearest exit door may not be the one you used when entering the building.
- Students requiring assistance in evacuation shall inform their instructor in writing during the first week of class.
- In the event of an evacuation, follow the instruction of faculty or class instructors. Do not re-enter a building unless given instructions by the following: Austin Fire Department, The University of Texas at Austin Police Department, or Fire Prevention Services office.
- Link to information regarding emergency evacuation routes and emergency procedures can be found at: www.utexas.edu/emergency