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Office Hours:
when door is open,
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VIBS 658.600
RESEARCH METHODS IN SCIENCE AND TECHNOLOGY JOURNALISM
Spring 2011
Wednesdays 9 to 11:45 a.m., 208 VRB

This course is intended mainly to help acquaint you with research methods as they relate to science and technology journalism (STJR). More specifically, goals of the course include increasing your ability to

- understand communication research methods
- evaluate research on STJR
- do academic research on STJR
- do applied research in the STJR workplace
- understand and evaluate research on scientific and technical topics you cover

Like other courses in the STJR program, this course is intended also to help you keep refining your writing and editing skills. In addition, it can serve as a foundation for courses in study design and statistics. For non-STJR students, the course can serve more broadly as an introduction to social science research methods.

The goals of this course will be pursued largely through classroom activities, readings, and writing assignments. Classroom activities will include quizzes on and discussion of textbook chapters, other discussion of readings about communication research methods, discussion of journal articles on research using those methods, guest presentations by STJR graduates who have done theses or dissertations, other guest sessions, and discussion of class members' writing assignments for the course. Because much of your learning will depend on your participation, you will be expected to attend class regularly; only in exceptional circumstances should more than two sessions be missed.

The textbook for the course is *Mass Media Research: An Introduction*, 9th edition, by Roger D. Wimmer and Joseph R. Dominick (Boston: Wadsworth, 2009). Other readings will consist mainly of research articles on topics in science and technology journalism. Core reading assignments are noted on the schedule below, and additional readings will be announced in class.

The graded items, the dates they are due, and the percentages of your grade they will constitute are as follows:

quizzes (on 16 chapters)	weekly	30%
(lowest two grades will be dropped)		
library searching exercise	2/16	5%
overview of a researcher's work	3/9	15%
systematic review article	4/13	30%
writing assignment of your choice	4/27	10%
class participation		10%

The writing assignments are described on the schedule below, and further guidance will be provided in class. All writing assignments should be word-processed and double-spaced; pages should be numbered. Unless otherwise requested, please submit hard copies.

Grading of assignments will be as follows: A+:98, A:95, A-:92, B+:88, B:85, B-:82, etc. To receive a grade in the A range, work must be of essentially professional quality.

The success of a course such as this one depends on contributions from the students as well as from the teacher. Suggestions for making the course more educational and more enjoyable are appreciated at any time.

TENTATIVE SCHEDULE

<u>Session/Date</u>	<u>Main Activities and Assignments</u>
1 Jan 19	<p>Introduction to the Course Presentation/Discussion: Examples of STJR Research Brief Recap or Introduction: Communication Theory Brief Recap or Introduction: The 2011 American Association for the Advancement of Science (AAAS) Annual Meeting Introduction to Next Week's Reading Browsing/Discussion: "Science News of the Year" <i>(Science News, January 1, 2011;</i> <i>http://www.sciencenews.org/view/issue/id/67757</i>)</p>
2 Jan 26	<p>Quiz and Discussion: Textbook Chapters Due Today Discussion: Application of Today's Reading to STJR Research Presentation/Discussion: Publishing STJR and Other Research: Outlets, Formats, and Stylebooks Introduction to Next Week's Reading Core Reading Due:</p> <ul style="list-style-type: none"> • textbook chapter 1: "Science and Research" • textbook chapter 2: "Elements of Research"
3 Feb 2	<p>Special Session: Searching the Journalism Research Literature Stephen Bales, PhD Assistant Professor and Humanities and Social Sciences Librarian Room 204B Evans Library Note: Please go directly to Evans Library. We will meet in the lobby and then go to Room 204B. Quiz and Discussion: Textbook Chapters Due Today Discussion: Examples of STJR Research Using Sampling Introduction to Next Week's Reading Core Reading Due:</p> <ul style="list-style-type: none"> • textbook chapter 3: "Research Ethics" • textbook chapter 4: "Sampling" • examples of STJR research using sampling

4 Feb 9	Quiz: Textbook Chapter Due Today Discussion: Reading Assigned for Today Discussion: Examples of Qualitative STJR Research Introductions: Library Searching Exercise Writing Assignment Due March 9 Core Reading Due: <ul style="list-style-type: none">• textbook chapter 5: "Qualitative Research Methods"• "A Beginner's Guide to Doing Qualitative Research in Mass Communication" by John J. Pauly (<i>Journalism Monographs</i>, Number 125, February 1991)• "Discourse Analysis and Science," by Denise Tillery, in <i>Encyclopedia of Science and Technology Communication</i>, edited by Susanna Hornig Priest (SAGE, 2010)• examples of STJR research using qualitative methods
5 Feb 16	Presentation by Roma Subramanian, STJR Master's Student Doing Qualitative Research Quiz and Discussion: Textbook Chapter Due Today Discussion: Examples of Content Analysis in STJR Discussion: Library Searching Exercise Discussion: Plans for AAAS Annual Meeting Introduction to Next Week's Reading Core Reading Due: <ul style="list-style-type: none">• textbook chapter 6: "Content Analysis"• examples of content analysis in STJR Exercise Due: library searching exercise Instructions for this exercise will be e-mailed.
6 Feb 23	Discussion: Relevant Highlights of the AAAS Annual Meeting Quiz and Discussion: Textbook Chapter Due Today Discussion: Other Reading Due Today Introduction to Next Week's Reading Discussion: Doing a Thesis or Dissertation Core Reading Due: <ul style="list-style-type: none">• textbook chapter 7: "Survey Research"• "Surveys," by Dietram S. Scheufele, in <i>Encyclopedia of Science and Technology Communication</i>, edited by Susanna Hornig Priest (SAGE, 2010)• examples of survey research in STJR
7 Mar 2	Quiz and Discussion: Textbook Chapters Due Today Discussion: Examples of Longitudinal and Experimental Research in STJR

Progress Reports: Writing Assignment Due March 9

Introduction: Review Article Assignment

Core Reading Due:

- textbook chapter 8: “Longitudinal Research”
- textbook chapter 9: “Experimental Research”
- examples of longitudinal and experimental research in STJR

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Mar 9

Workshop: Writing Assignment Due Today

Introduction to Reading for Next Class

Writing Due: overview of a researcher’s work

Instructions: Identify someone who has been sole author or first author of at least 3 journal articles that report research using methods discussed in this course. (Normally the person should be an STJR researcher.)

However, for class members other than STJR students, the researcher may be in another field.) Read these articles (or at least 3 of these articles if the person has published more than 3). Also interview the person about his or her research. Then prepare a paper summarizing, evaluating, and integrating what you have found. In keeping with the focus of this course, please emphasize methods used in the reported research. Also include information about the researcher. This assignment should run about 1250 words (5 double-spaced pages). It should include a reference list.

Note: If you would like to rewrite your overview after the workshop, you may do so and submit the rewritten version on March 30. You will still need to submit the original version on March 9 to show that you have completed the required work on time. However, if you submit a rewrite, your grade will be based on it, not the original version.

Spring Break * Spring Break

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March 23

Recap of the Course Thus Far

Quiz and Discussion: Textbook Chapter Due Today

Presentation/Discussion: Preparing a Review Article as Research

Introduction to Next Week’s Reading

Core Reading Due:

- “Communicating Science: A Review of the Literature” by Michael R. Weigold (*Science Communication*, Volume 23, Number 2, December 2001, pages 164-193)
- “The Value of Systematic Reviews as Research Activities in Medical Education” by Thomas A. Lang (*Academic Medicine*, Volume 79, Number 11, November 2004, pages 1067-1072)
- examples of systematic review articles
- textbook chapter 10: “Introduction to Statistics”

10 March 30	Quiz and Discussion: Textbook Chapter Due Today Discussion: Examples of STJR Research Testing Hypotheses Progress Reports: Review Article Assignment Introduction to Next Week's Reading Core Reading Due: <ul style="list-style-type: none">• textbook chapter 11: "Hypothesis Testing"• examples of STJR research testing hypotheses (Reminder: If you are rewriting the overview of a researcher's work, it is due in class today.)
11 April 6	Quiz and Discussion: Textbook Chapter Due Today Progress Reports: Review Article Assignment Introduction: Final Assignment Presentations by One or More STJR Graduates or Others Who Have Done or Are Doing Theses or Dissertations Introduction to Next Week's Reading Core Reading Due: <ul style="list-style-type: none">• textbook chapter 12: "Basic Statistical Procedures" Browsing Due: some STJR master's theses (See https://libcat.tamu.edu/cgi-bin/Pwebrecon.cgi?SC=Subject&SA=Major%20Science%20and%20Technology%20Journalism&PID=oYq4VlF0Pwg0zoJ5a1m6LoXym-vf&BROWSE=1&HC=14&SID=2.)
12 April 13	Quiz and Discussion: Textbook Chapter Due Today Discussion: Plans for Final Assignment Introduction to Next Week's Reading Workshop: Writing Assignment Submitted Today Core Reading Due: <ul style="list-style-type: none">• textbook chapter 13: "Newspaper and Magazine Research" Writing Due: systematic review article on an STJR topic Instructions: Identify a topic that interests you and about which a substantial amount of research using methods discussed in this course has been done. (For STJR students, this topic should be in STJR; for other students, it may be in STJR or another field.) Review the literature about this topic, and prepare a systematic review article on it. (Note: In planning and doing your literature search, you are very strongly encouraged to work with Dr. Bales from the library.) Your article should include an introduction; a methods section stating how you reviewed the literature; one or more sections summarizing, evaluating, and integrating the literature; and a reference list. In presenting and discussing the literature, particular attention should be paid to methods used in the research being cited. This assignment should run 2000 to 2500 words (about 8 to 10 double-spaced pages). It should be concisely written; length in itself will not be rewarded.

13 Quiz and Discussion: Textbook Chapter Due Today
April 20 Progress Reports: Final Assignment
Presentations by One or More STJR Students Who Are Completing Internships
Introduction to Next Week's Reading

Core Reading Due:

- textbook chapter 14: "Research in the Electronic Media"

14 Quiz and Discussion: Textbook Chapters Due Today
April 27 Presentation/Discussion: Writing Assignment for This Week
Wrap-Up

Core Reading Due:

- textbook chapter 15: "Research in Advertising"
- textbook chapter 16: "Research in Public Relations"

Writing Due: brief writing assignment of choice

Instructions: Prepare a final piece of writing relating to this course.

Possibilities include

- a non-technical description and explanation of some major research methods used in a scientific field of your choice (for example, astronomy, biotechnology, or chemistry)
- a proposal for a piece of research on a science communication topic

This assignment should total about 1000 words (4 double-spaced pages).

Optional Assignment: rewrite of systematic review article

Instructions: Drawing on feedback from classmates and the instructor, prepare a revised version of your systematic review article. If you choose to do this assignment, you have until May 4 to submit it. Satisfactory completion of this rewrite will add 2 points to the original grade for your systematic review article.

The Americans with Disabilities Act (ADA) is a federal antidiscrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Office of Disability Services in Cain Hall, Rm. B118, or call 845-1637.

As the Aggie Honor Code states, "An Aggie does not lie, cheat, or steal or tolerate those who do." It is expected that you will neither give nor receive unauthorized aid in this course. All writing for this course must be your original work. For Texas A&M Honor Council Rules and Procedures, please see www.tamu.edu/aggiehonor.