I. COURSE DESCRIPTION

Explores the research domain of information studies, the nature of fundamental and applied research efforts therein, and criticism of articles in heavily cited journals. Focuses on the critical evaluation of research results through a consideration of appropriate statistical sampling, research design, testing and overall analysis. Employs electronic textbooks with interactive quizzing and immediate feedback capability. Attempts to avoid the qualitative/quantitative methodology dichotomy.

II. OBJECTIVES, REQUIREMENTS AND GRADING

1. To acquire an understanding of the range and depth of theoretical and applied research literatures of information studies, and to develop the ability to evaluate critically various selected works from those literatures. Required: Perusal through information studies research literature, selection of a specific, significant research article, and submission of a criticism of that article (30% of course grade).

2. To understand contemporary research methodologies and to evaluate critically their application to applied problem solving and theory building and testing. Required: Study of textbook chapters (The Research Methods Knowledge Base, 2 ed.) and completion of all twelve end-of-chapter online quizzes (30% of course grade).
OBJECTIVES, REQUIREMENTS AND GRADING (Continued)

3. To review the concepts studied for completion of the first two above objectives (with a restricted emphasis on commonly used parametric and non-parametric statistical sampling and testing) and to evaluate critically statistically oriented research reports. Required: Completion of final examination covering research concepts generally, statistical sampling and testing specifically, and critical evaluation of a selected statistical finding (30% of course grade).

4. To develop professional and communicative skills to contribute positively, constructively and consistently to collaborative efforts. Required: Active, consistent, and constructive course participation (10% of course grade).

III. REQUIRED TEXTBOOKS


Because this will be our primary textbook, please purchase the hard copy edition from the University Co Op and go online to purchase the electronic, interactive edition, which you will need individually to do exercises and answer online quiz questions. The combined cost for the paperback and the online edition is about $50.00 plus tax. The online edition is about $25. (Should anyone order only the online edition of the book, use this special ISBN: 1-931442-48-7.) Note that the publisher is offering free UPS ground shipping through January 31, 2004 (see www.atomicdog.com press release). It is perhaps easier to order the above online edition and the online edition of the second required textbook at one time with a single transaction. See instructions below.

REQUIRED TEXTBOOKS (Continued)

To order an online edition, go to www.atomicdog.com, click on the green “Purchase/Activate Textbooks” button or enter course information in the purple “Students Get Started…” box. With your purchase of the paperback edition from the Co Op, you should receive a booklet titled How to Use your Online Edition. In it, you will find a set of instructions for accessing your online edition, registering and activating your book for this course, and a Book Activation Key. The Course Registration ID is 1620532304010 (only for this course this semester). You will get your own Book Activation Key when you buy each book. You may email support@atomicdog.com or phone 1-800-310-5661, ext. 8, to obtain assistance. Instructions will be distributed in class, and the Teaching Assistant will, as needed, help you order and activate your account.

IV. EXAMPLES OF SUPPLEMENTARY RESOURCES

1. General research review sources in PCL (hardcopy) include these:
   - Annual Review of Information Science and Technology (Z699A1)
   - Advances in Librarianship (Z 674 A4);
   - Advances in Computers (QA 76 A3);
   - Advances in Information Systems (QA 76 D3155);

2. The following sources are available from UT Library Online (www.lib.utexas.edu):
   - Library and Information Science Abstracts;
   - Library Literature and Information Science;
   - Encyclopedia of Library and Information Science, (2d.ed.);
   - Annual Review of Psychology.

3. Grant funding opportunities can be found through such databases as www.grants.gov and http://fundingopps.cos.com.


SUPPLEMENTARY RESOURCES (Continued)


V. GUIDELINES FOR COMPLETION OF REQUIREMENTS

1. Survey of research literature, selection of significant, statistical research article and submission of critical evaluation of selected article. First, become generally familiar with the publications that provide general reviews of the research literature (these are covered in item IV above) as well as the leading research journals of the information studies fields. We will concentrate specifically on sources related to the information science, library science, and informatics fields. Second, review the attachment to this syllabus, which reports the rank order of the field’s leading research journals (those with the highest citation impact factors). Then go to the UT Library Online (www.library.utexas.edu) and then to “Online Journals; Online Journals by Subject; Library and Information Science” to get a feel of the significance and trustworthiness of research reported in the three dozen or so online journals that have the highest citation factor. Third, in collaboration of no more than one partner, search for a set of the most significant, articles that you would like to evaluate critically, then select what you regard as the most interesting, significant and statistically sound single research article. Fourth, in collaboration with your partner, critically evaluate the article according to the criteria of overall significance, soundness of sampling, appropriateness and accuracy of measurement, quality of research design, and validity and trustworthiness (note that the latter four criteria correspond to Parts 2-5 of the primary textbook). As you read through the textbook and refine your evaluative criteria, you might wish to reconsider the article that you selected to evaluate, and possibly select a different article. Fifth, after you have read
most or all of the primary textbook and in collaboration with your partner, draft a critical evaluation of the article that you finally select.

GUIDELINES (Continued)

Incorporate the five criteria listed above; be sure to coordinate the lessons learned from the corresponding Parts of the textbook. Papers should be no longer than seven pages in length, typed double-spaced (about one page for each of the five above criteria, plus a brief, introductory description of the article and your overall conclusion). Be sure to cite the article you have reviewed and provide a URL so that the instructors can directly access your selected article. You need not include other references, although you may wish to cite specific pages of the textbook (you may simply use page numbers in parentheses); if so please provide one full citation to the textbook. **Sixth**, submit a hard copy of your critical evaluation to the instructor by the due date. Include the names of both partners at the top of the first page. Please do not use a cover or cover page when you submit your report. **Grading criteria** for the papers include the apparent soundness of your assessment of the selected research article’s (1) overall significance, (2) sampling, (3) measurement, (4) research design, (5) analysis, validity and trustworthiness, as well as (6) your concluding analysis. Each criterion has a weight of five points, for a total of 30 points (30% of course grade).

2. **Completion of each end-of-chapter Quiz in The Research Methods Knowledge Base.** Again, with your purchase of your hard copy of the primary textbook (Trochim, *Research Methods*), you will have available a book activation key for access to your corresponding electronic edition of the textbook. Read through each chapter of the *Research Methods* textbook according to the calendar schedule (or more rapidly at your own pace). Note that in the electronic edition you may enter notes, highlights, or reminders to learn more, or do key term matching exercises. After reading each chapter, take each end-of-chapter quiz and submit it to the instructor. Your answers will be scored automatically, with feedback for incorrect answers. Your grade will be recorded in the instructor’s database. Each chapter quiz consists of about 10 questions, for a total of 120 questions for all chapters. Each correct answer is worth ¼ point, for a possible maximum total of 30 points or 30% of the course grade.

Please note: do not submit answers to quizzes in the *Introductory Statistics* textbook to complete this second course requirement. Use *Introductory Statistics* as a supplementary reference and learning resource as you go through the *Research Methods* textbook to develop your criticisms of your selected research article. *Introductory Statistics* will also be used to amplify the topics of statistical sampling and testing in preparation for the final examination.
GUIDELINES (Continued)

3. **Final Examination.** The final exam is tentatively scheduled for Wednesday evening, **May 12 from 7:00-10:00 p.m.** (the official University final exam time; location to be announced). The final will be a closed book exam and is expected to consist of two parts. The first part will cover research concepts generally and, more specifically, a few basic concepts of statistical sampling and hypothesis testing. The first part of exam will probably consist of about 15 questions drawn from end-of-chapter quizzes in *The Research Methods Knowledge Base* and about 30 questions likewise drawn from *Introductory Statistics*. We will review in class a limited number of sampling and hypothesis testing concepts from both *The Research Methods Knowledge Base* and from supporting coverage in *Introductory Statistics* (to be drawn selectively from Chapters 5, 7, 8, 9, 11, 14, 15, 16, 18, 19 and 22). The objective here is to gain a basic understanding of sampling, frequency distributions, correlation, the T-Test, and Chi-Square testing, and a critical stance toward research literature that includes or fails to include appropriate sampling and testing. To review for the first part, you might wish to review the quizzes you took from the *Research Methods* book. You may take and submit as many quiz questions as you wish from the above chapters in *Introductory Statistics*, but these pre-final exam review submissions will not be graded. The second part of the final will involve your critical evaluation of findings drawn from a selected research report. The first part is expected to count for 15% of the course grade and the second part for 15% (total 30%). Preparation for the final exam should be continuous, especially because preparation is embedded in the first two assignments. Conversely, the final will mirror the two first assignments.

4. **Active, constructive and consistent course participation.** To help us share and better understand the range and depth of the research literatures of information studies, you will be given an opportunity to give a brief (five-minute) preliminary oral report to the class on your critical evaluation of the article that you reviewed to complete the first assignment above. This oral report will count for 5% of the course grade, while additional positive class contributions and attendance will count for 5% (total 10%).

VI. **COURSE POLICIES**

1. The assigned course grade will be based on the following scale:
   - 85-100 points = A zone
   - 65-84 points = B zone
   - 50-64 points = C zone
   - 35-49 points = D zone
COURSE POLICIES (Continued)

2. A grade of Incomplete will be given only for highly exceptional circumstances that can be documented or otherwise verified.
3. In fairness to those who complete work on time, a penalty will be assessed for late submissions.
4. Class breaks are not a good time to raise questions or problems with the instructor, since this can delay resuming the class at the end of very brief breaks.
5. If at all possible, matters pertinent to the course should be raised during the class so that everyone is given the same information.
6. A period of after class time from 9:00-9:30 p.m. will be reserved as an informal office hour for members of this class, except when circumstances dictate otherwise. This should be helpful especially to class members who commute from out-of-town or those who work during the daytime.
7. Please generally avoid the use of email to communicate with the instructor. Again, it is best to raise questions in class as they occur, since others might have a similar query and because everyone should be given the same information. Often, if it is necessary to confront a problem outside of class, you may phone either instructor and leave a voice mail.
8. At peak times especially, it might be necessary for one or both instructors to schedule additional tutorial sessions or office hours. Either of these can be arranged as necessary. Again, the instructor will remain after class to confront problems, and occasionally take time to explain or elaborate on concepts.
9. Because the instructor welcomes your comments about the course, one or more informal surveys will be given during the semester, in addition to the formal survey at the end of the semester. Specific comments are more useful than vague ones. You may comment to the instructors directly or indirectly at any time during the semester; comments may be oral or written and submitted anonymously.
10. If you have a good command of English, please do not hesitate to help International students (whose native language is not English and appear to be struggling) with their written assignments or other problems. Consider partnering with an International student on the written research criticism (and conversely). If you do so, please let the instructor know so that your participation effort can be noted.
11. Please read ahead of time the assigned readings to be addressed in class. Avoiding stress becomes especially important as the semester progresses; April is often a very stressful month, owing to an accumulation of assignments and other pressures.
12. We will also use the Blackboard web-based teaching platform for the occasional posting of course communications and documents. The TA will offer a short session on the use of Blackboard.
III. COURSE CALENDAR

Wednesday

January 21
• Review of syllabus and elaboration of requirements;
• Course policies;
• Obtaining textbooks;
• The first requirement: Reviewing online LIS journals and citation impact.

January 28
• Course biographical information and introductions;
• The broad realm of information studies;
• Discussion of research review sources and journals;
• The criterion of research significance;
• Citation impact;
• Short Blackboard tutorial.

February 4
• Toward selection of articles & partners for critical evaluation project;
• Shared observations on the journal research literature;
• Read Trochim, Research Methods, (abbreviated “T”), Read Chapter 1, Foundations; submit end-of-chapter quiz answers;
• Begin using Stockburger, Statistics (abbreviated “S”) as a reference/supplementary source; Skim chapters and read selectively; Skim Chapters 1 & 2. Darius Mahdjoubi will present on the development and analysis of conceptual models.

February 11
• Toward selection of candidate set of journal research articles;
• Read T, Chapter 2, Sampling; submit quiz answers;
• Skim S, Chapters 2 & 3;

February 18
• Team of two individuals select specific research journal article for critical evaluation. Coordinate your critical review with chapter content of T;
• Read T, Chapter 3, Measurement; submit quiz answers;
• Skim S, Chapter 4.

February 25
• Q & A on evaluation of research articles;
• Read T, Chapter 4, Survey Research and Scaling; submit quiz;
• Skim/read S, Chapter 5; skim Chapter 6.
CALENDAR (Continued)

March 3  
- Critical evaluation of research;  
- Read T, Chapter 5, Qualitative and Unobtrusive Measures; submit quiz answers;  
- Read/skim S, Chapters 7 & 8.

March 10  
- Critical evaluation and use of research;  
- Read T, Chapter 6, Design; submit quiz answers;  
- Read/skim S, Chapter 9; skim Chapter 10.

March 17 Spring Break: No class  
- Read T, Chapter 7, Experimental Design; submit quiz answers;  
- Read/skim S, Chapter 11.

March 24  
- Discussion of critical reviews of research articles;  
- Read T, Chapter 8, Quasi-Experimental Design; submit quiz answers;  
- Skim S, Chapters 12, 13 & 14.

March 31  
- Critical evaluation and use of research;  
- Read T, Chapter 9, Advanced Design Topics; submit quiz answers;  
- Read S, Chapter 15, Correlation.

April 7  
- Begin five minute oral reports on critical review of online journal articles;  
- Read T, Chapter 10, Analysis; submit quiz answers;  
- Read S, Chapter 16, Hypothesis Testing; skim Chapter 17.

April 14  
- Continue five minute oral reports on critical review of research articles;  
- Read T, Chapter 11, Analysis for Research Design; submit quiz answers;  
- Read/skim S, Chapter 18, Testing Hypotheses; Read/skim Chapter 19, T-Test.

April 21  
- Conclude five minute oral reports on critical review of research article;  
- Read T, Chapter 12, Write-Up; submit quiz answers;  
- Read/skim S, Chapter 20, Errors in Hypothesis Testing; skim Chapter 21, ANOVA;  
- **Due: Critical evaluation of selected research article.**
CAALENDAR (Continued)

April 28
- Discussion of critical reviews;
- Read S, Chapter 22, Chi-Square/Contingency; skim Chapter 23.

May 5 (last class day)
- Review for final exam;
- Concluding discussion.

May 12  7:00-10:00 p.m.
Final Examination; Room TBA.