University of Wisconsin – Milwaukee
School of Information Studies

L&I SCI 691
Special Topics in Information Science:
The Search Engine Society

Fall 2010
Wednesday, 5:30-8:10p
221 Curtin Hall

Instructor:
Michael Zimmer, PhD
Office: Bolton Hall, Room 656
Phone: 414-229-3627
E-mail: zimmerm@uwm.edu
Office hours:

Description:
This course will examine the role of search engines in our information society, including their various impacts on information institutions, information policy, and information ethics.

Course Summary:
Search engines have become the center of gravity of our contemporary information society, providing a powerful interface for accessing the vast amount of information available on the World Wide Web and beyond. The audacious mission of Google, for example, is "to organize the world's information and make it universally accessible and useful." Attaining such a goal necessarily results in significant changes to the ways in which information is created, stored, retrieved, and used. This course will critically examine the nature of search engines and their role in our information society, and reveal the unique challenges they bring to bear on information institutions, information policy, and information ethics.

Course Goal:
The goal of this course is to situate search engines within the broader sphere of information studies, critically evaluate their impact on information institutions (libraries, news organizations, publishers), and deliberate on their broader policy and ethical ramifications (copyright and fair use, privacy, censorship, intellectual freedom).

Student Learning Objectives:
Upon successful completion of the course, students will:
1. Understand how search engines and related products and services work from a technical perspective
2. Understand how search engines impact the nature of information, as well as various information institutions and professions
3. Recognize numerous information policy and ethical implications of our expanding search engine society

Method of Instruction & Learning:
- Classroom lecture, video screenings, and discussion.

Prerequisites:
- Junior standing (undergraduates), L&I SCI 501 (graduate students), or permission of instructor
- Students will need basic familiarity with how the Internet and World Wide Web operate.

MLIS Core Competencies Addressed:
- Foundations of the Profession: National and international social, public, information, economic, and cultural policies and trends of significance to the library and information profession.

Course Schedule: (subject to change)

Sept. 8   **Introduction to the Course**
  Topics: Introductions; course content, expectations & deliverables
  Readings: - Screening: "Google: Behind the Screen"

Sept. 15   **Early Searching**
  Topics: Explore the history of searching online
  Readings: - Halavais, Ch. 1 "The Engines"
              - Battelle, Ch. 3 "Search Before Google"

Sept. 22   **Web Search: How it Works**
  Topics: Understand the mechanisms and technical architecture of how search engines work
  Readings: - Halavais, Ch. 2 "Searching"
              - Brin, S., & Page, L. (1998). The Anatomy of a Large-Scale Hypertextual Web Search Engine. *WWW7 / Computer Networks, 30*(1-7), 107-117. http://infolab.stanford.edu/~backrub/google.html

Sept. 29 *   **The Search Economy**
  Topics: How do search engines make money, and others make money off of search engines?
  Readings: - Battelle, Ch. 7 "The Search Economy"
              - Van Couvering, E. (2008). The History of the Internet Search Engine: Navigational Media and the Traffic Commodity. In A. Spink & M. Zimmer (Eds.), *Web Searching: Multidisciplinary Perspectives* (pp. 177-206). Dordrecht, The Netherlands: Springer.
              - Zimmer, M. (2006). The value implications of the practice of paid search. *Bulletin of the American Society for Information Science and Technology*

Oct. 6 *   **Web Search: Attention & Manipulation**
  Topics: The importance and impact of search engine ranking, and how it can be manipulated and controlled
  Readings: - Halavais, Ch. 3 "Attention" & Ch. 4 "Knowledge & Democracy"
              - Grimmelmann, J. (2009). The Google Dilemma. *New York Law School Law Review, 53*.

Oct. 13 *   **Web Search: Censorship, Speech & Diversity**
  Topics: What role do search engines play in the complexities of free speech, censorship, and ensuring access to diverse materials
  Readings: - Halavais, Ch. 5 "Censorship"
              - Rosen, J. (2008, Nov. 28). "Google's Gatekeepers" *New York Times Magazine*, p 50. http://www.nytimes.com/2008/11/30/magazine/30google-t.html.
              - Various web articles on Michelle Obama image controversy (D2L)

Oct. 20   **NO CLASS** *(Association of Internet Researchers Conference, Sweden)*
  Assignment: Written Assignment #1 due, Friday, October 22

Oct. 27 *   **Web Search: Surveillance & Privacy**
  Topics: How might search engines threaten user privacy, and should we care?
  Readings: - Halavais, Ch. 6 "Privacy"
              - Hoofnagle, C. (2009). Beyond Google and evil: How policy makers, journalists and consumers should talk differently about Google and privacy. *First Monday, 14*(4). http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/2326/2156.
              - Zimmer, M. (2008). Privacy on Planet Google: Using the Theory of "Contextual Integrity" to Clarify the Privacy Threats of Google's Quest for the Perfect Search Engine. *Journal of Business & Technology Law*, *3*(1), 109-126.

Nov. 3 *   **Search Engines & Copyright**
  Topics: Does a search engine providing thumbnails and access to content violate copyright laws? Does having easy access to content via search engines force us to reconsider copyright protecdtion?
  Readings: - Fitzgerald, B., O'Brien, D., & Fitzgerald, A. (2008). Search Engine Liability for Copyright Infringement. In A. Spink & M. Zimmer (Eds.), *Web Searching: Multidisciplinary Perspectives* (pp. 103-120). Dordrecht, The Netherlands: Springer.
                 - Vaidhyanathan, S. (2007). The Googlization of Everything and the Future of Copyright. *University of California Davis Law Review, 40*(3), 1207-1231.

Nov. 10 *   **Google Book Search: Intellectual Property**
  Topics: What are the intellectual property concerns with the Google Book Search product and proposed Settlement Agreement?
  Readings: - http://books.google.com/googlebooks/agreement/
                 - Grimmelmann, J. (2009). How to Fix the Google Book Search Settlement, *Journal of Internet Law*.
                 - Samuelson, P. (2009). The Dead Souls of the Google Book Search Settlement, *Communications of the ACM, 52*(7), 28-30.

Nov. 17 *   **Google Book Search: Privacy & Intellectual Freedom**
  Topics: How might the Google Book Search project and proposed Settlement Agreement threaten intellectual privacy and the right to read anonymously?
  Readings: - ALA, ACRL, ARL Google Book Settlement briefs (skim)
                 - Center for Democracy & Technology (2009). Privacy Recommendations for the Google Book Search Settlement. http://cdt.org/copyright/20090727_GoogleRecs.pdf
                 - Zimmer, M. (2009). Thoughts on Privacy and the Google Book Settlement: What's At Stake, Why We Need to Advocate, and What We Can Do. Presented at *The Google Books Settlement and the Future of Information Access* conference, UC-Berkeley School of Information.

Nov. 24   **NO CLASS - Thanksgiving**
  Assignment: Written Assignment #2 due, Friday, Nov. 26

Dec. 1   **Regulating Search?**
  Topics: Considering all we've discussed in class, is there a need – or even the possibility – of regulating search engines?
                 (also brief in class discussion of paper topics)
  Readings: - Gasser, U. (2006). Regulating Search Engines: Taking Stock and Looking Ahead. *Yale Journal of Law & Technology, 9*, 124-157. (excerpts)
                 - Pasquale, F., & Bracha, O. (2007). Federal Search Commission? Access, Fairness and Accountability in the Law of Search. *U of Texas Law*, Public Law Research Paper No. 123 (excerpts)

Dec. 8   **The Future of Search Engines**
  Topics: What are the newest advances and vision for search engines of the future
  Readings: - Halavais, Ch. 8 "Future Finding"
                 - Battelle, Ch. 11 "Perfect Search"
                 - Mayer, M. (2008). The Future of Search, *Google Blog*, http://googleblog.blogspot.com/2008/09/future-of-search.html

Dec. 15   **NO CLASS – study day**

Dec. 22   **NO CLASS – Exams**
  Assignment: *Final research paper due, noon*

Required Texts:
- Halavais, A. (2008). *Search Engine Society*. Cambridge: Polity. ISBN: 978-0-7456-4215-4

- Battelle, J. (2005). *The search: How Google and its rivals rewrote the rules of business and transformed our culture*. New York: Portfolio. [selected chapters; recommend buying book, but not required]

- Additional readings via D2L

Deliverables:
- Weekly responses: Students must submit written responses for each week's topic and assigned readings (starting Sept 29 through Nov 17). Questions will be distributed at the beginning of the week via D2L. Total length of responses should be approximately 250-500 words; see "Assignments" section below for additional formatting guidelines and instructions. Responses should be printed out and brought to class to guide discussion, and turned in at the end of class.

  Each response can earn up to 2 points: (partial points may be awarded)
    - 2 points: thought-provoking, showed thorough understanding of the topic, referenced passages or concepts from assigned reading
    - 1 point: was responsive to the question, but only marginally connected to the assigned reading and didn't show effort to think beyond the simple answer
    - 0 points: unresponsive to the question, showed a lack of reading the assigned material

- Discussion leader: Graduate students will be assigned to at least one course session (starting Sept 29 through Nov 17) to present their responses in class to spark discussion. Along with answering the required response question, the assigned discussion leader should come up with at least 2 additional questions or concerns to spark additional discussion. The assigned discussion leader must post her/his response & additional questions to D2L by 5:30pm the night before class.

  Discussion leaders will be graded based on quality of the questions posed, preparation, and overall performance. (Undergraduate students can opt to be discussion leaders for extra credit, if slots are availabled, but it is not required, nor guaranteed)

- Written Assignment #1: A set of short essay questions will be distributed based on the first part of the semester's topics for completion as a take-home assignment. Written responses will be due via D2L on Friday, October 22.

- Written Assignment #2: Students will write a brief proposal for their final research paper (see below). The abstract should open with a brief discussion of the broader issue, and then mention a more specific example that will be researched. Five potential resources/citations should also be identified and provided. Length should be 250-400 words. Abstract will be due via D2L on Friday, November 26 (Thanksgiving break).

  Feedback will be provided both in writing and in during brief peer discussion in December 1 class session. More details will be provided.

- Research Paper: Students will be required to write a research paper in lieu of a final exam. The paper will focus on one of the issues discussed in class, describe the impact of search engines on the nature of information, institutions and/or professions, and present (at least) two different positions within the debate surrounding the issue.

  Undergraduate students will be required to write 8-10 pages, which will be more descriptive in nature. *Graduate students* will be required to write 12-15 pages, and will need to articulate and defend *their own* position on the topic, thus, a more normative paper.

Credit Breakdown:	UG	GR		Grading Rubric:	
Attendance and participation	20%	10%		A	94-100
Weekly reflections	20%	20%		A-	91-93
Discussion leadership		10%		B+	88-90
Assignment #1	15%	10%		B	84-87
Assignment #2	15%	10%		B-	81-83
Research paper	30%	40%		C+	78-80
				C	74-77
				C-	71-73
				D	60-70
				F	0-59

Class Policies:

- Attendance:

  - Students are expected to attend each class, arriving prepared to participate in discussions of the class material, respond to direct questions, and, when appropriate, engage in constructive and collaborative group work.

  - Absences require the instructor's approval in advance, and may require written documentation of medical or family emergencies. Note: Simply providing advanced notice to instructor of an absence does not mean it was an approved/escused absence. Multiple unexcused absences will be noted and will impact your "Attendance and participation" grade.

- Participation:

  - Each student is expected to actively and constructively participate in class. I will note contributions by each student in each class meeting to guide the assessment of the "Attendance and participation" grade element. If you make well-informed and relevant contributions to at least half the sessions then you should score very well. There is no need to hog the discussion, and a few quiet days will not hurt your score.

  - In order to accomplish this objective, it is imperative that you prepare for class – do the readings beforehand.

  - For class meetings dedicated to group work, your participation will be assessed based on the constructive and collaborative use of this in-class time to work on group assignments.

  - If you feel uncomfortable talking in class, credit may be awarded for meetings during office hours, or for answers submitted in writing before the section meets (this consideration requires advance notice and approval by the instructor).

- Atmosphere for Learning:

  - Students are encouraged to participate in open and frank discussions of the course material, but are also expected to respect the opinions of other students and to engage in discussion and debates in a sensitive and respectful manner.

  - Before class begins, please turn off all cell phones, instant messengers, and any other items that might ring, buzz, play "My Humps," or otherwise call attention to themselves and disrupt class.

  - Laptop computers may be used to assist in note taking. But please check email, chat, and Facebook on your own time, not during class.

  - Fair warning of things I will take note of: Coming to class late, leaving class early, sleeping in class, excessive eating in class, playing on your laptop or texting during class, doing work for other courses in class, etc. These, or similar, activities will negatively affect your participation grade.

- Assignments:

  - All written assignments must be turned in on time, at the beginning of class on the due date. Late submissions will not be allowed except for a confirmed emergency with instructor's pre-approval.

  - Assignments are to be typed, double-spaced, with one-inch margins. Use a 12-point kerned font such as Times New Roman. Multi-page documents should have page numbers and be stapled. *Don't forget your name, the course number, an assignment description, and the date.* Assignments turned in via D2L should be in .doc, .docx, or .rtf format.

  - Rules of academic conduct require that you not use the work of others without clearly indicating it as such (using proper and consistent citation formats). Academic misconduct may result in a lowered grade, no credit for a given assignment, or failure of the course.

- Contacting Me:

  - I will be available for *short* discussions immediately before and after class.

  - By email: I will respond to class-related emails during normal work hours, and will generally reply the same day as received (an e-mail sent after working hours, however, may not be replied to until the next morning). Please be sure to use your UWM e-mail account, identify yourself and the course, and *always* use proper and professional e-mail etiquette. (There's a good guide to student email etiquette here: http://www.ust.udel.edu/action/Current%20Students/Academics/email.aspx)

  - In person: I will be in my office and available to talk to you during my scheduled office hours (see above). Other times may be available via prior arrangement.

  - By telephone: During my campus office hours I will also be accessible my office telephone. The number is 414-229-3627. So if you are unable to make it to campus, or are an online student, you can still call up to ask questions or seek advice.

UWM and SOIS Academic Policies:
The following links contain university policies affecting all SOIS students. Many of the links below may be accessed through a PDF-document maintained by the Secretary of the University: http://www.uwm.edu/Dept/SecU/SyllabusLinks.pdf.

Undergraduates may also find the ***Panther Planner and Undergraduate Student Handbook*** useful (http://www.uwm.edu/Dept/OSL/DOS/Handbook2005-06.pdf). For graduate students, there are additional guidelines from the Graduate School (http://www.uwm.edu/Dept/Grad_Sch/StudentInfo/), including those found in the ***Graduate Student and Faculty Handbook***: http://www.uwm.edu/Dept/Grad_Sch/Publications/Handbook/.

- Students with disabilities. If you will need accommodations in order to meet any of the requirements of a course, please contact the instructor as soon as possible. Students with disabilities are responsible to communicate directly with the instructor to ensure special accommodation in a timely manner. There is comprehensive coverage of issues related to disabilities at the Student Accessibility Center (http://www.uwm.edu/Dept/DSAD/SAC/MainOffice.html), important components of which are expressed here: http://www.uwm.edu/Dept/DSAD/SAC/SACltr.pdf.

- Religious observances. Students' sincerely held religious beliefs must be reasonably accommodated with respect to all examinations and other academic requirements, according to the following policy: http://www.uwm.edu/Dept/SecU/acad%2Badmin_policies/S1.5.htm. Please notify your instructor within the first three weeks of the Fall or Spring Term (first week of shorter-term or Summer courses) of any specific days or dates on which you request relief from an examination or academic requirement for religious observances.

- Students called to active military duty. UWM has several policies that accommodate students who must temporarily lay aside their educational pursuits when called to active duty in the military (see http://www3.uwm.edu/des/web/registration/militarycallup.cfm), including provisions for refunds, readmission, grading, and other situations.

- <u>Incompletes</u>. A notation of "incomplete" may be given in lieu of a final grade to a student who has carried a subject successfully until the end of a semester but who, because of illness or other unusual and substantial cause beyond the student's control, has been unable to take or complete the final examination or some limited amount of other term work. An incomplete is not given unless the student proves to the instructor that s/he was prevented from completing course requirements for just cause as indicated above (http://www.uwm.edu/Dept/SecU/acad%2Badmin_policies/S31.pdf).

- <u>Discriminatory conduct (such as sexual harassment)</u>. UWM and SOIS are committed to building and maintaining a campus environment that recognizes the inherent worth and dignity of every person, fosters tolerance, sensitivity, understanding, and mutual respect, and encourages the members of its community to strive to reach their full potential. The UWM policy statement (http://www.uwm.edu/Dept/SecU/acad%2Badmin_policies/S47.pdf) summarizes and defines situations that constitute discriminatory conduct. If you have questions, please contact an appropriate SOIS administrator.

- <u>Academic misconduct</u>. Cheating on exams and plagiarism are violations of the academic honor code and carry severe sanctions, ranging from a failing grade for a course or assignment to expulsion from the University. See the following document (http://www.uwm.edu/Dept/OSL/DOS/conduct.html) or contact the SOIS Investigating Officer (currently the Associate Dean) for more information.

- <u>Complaints</u>. Students may direct complaints to the SOIS Dean or Associate Dean. If the complaint allegedly violates a specific university policy, it may be directed to the appropriate university office responsible for enforcing the policy.

- <u>Grade appeal procedures</u>. A student may appeal a grade on the grounds that it is based on a capricious or arbitrary decision of the course instructor. Such an appeal shall follow SOIS appeals procedures or, in the case of a graduate student, the Graduate School. These procedures are available in writing from the respective department chairperson or the Academic Dean of the College/School (http://www.uwm.edu/Dept/SecU/acad%2Badmin_policies/S28.htm).

- <u>Examinations, Finals</u>. The Secretary of the University is authorized to prepare the final examination schedule. The time of the final examination for an individual or a class may be changed only with the prior approval of the dean or director of the respective college/school. The change will involve a postponement to a later date. For individuals with exam conflicts, a separate week at the very end of the exam week will be reserved to take one of the conflicting exams (http://www.uwm.edu/Dept/SecU/acad+admin_policies/S22.htm).

- <u>D2L and Student Privacy</u>: Certain SOIS courses utilize the instructional technology Desire to Learn (D2L) to facilitate online learning. D2L provides instructors the ability to view both individual data points and aggregate course statistics, including the dates and times individual students access the system, what pages a student has viewed, the duration of visits, and the IP address of the computer used to access the course website. This information is kept confidential in accordance with the Family Educational Rights and Privacy Act (FERPA), but may be used by the instructor for student evaluation within the constraints of this particular course.