

University of Wisconsin – Milwaukee  
School of Information Studies

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

**Instructor:**

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**Description:**

This course critically examines the role of search engines in contemporary 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, and critically evaluate how technical design decisions have social and policy ramifications
2. Understand how search engines impact information organization & retrieval, as well as the related information institutions and professions
3. Synthesize course material to recognize and critically examine numerous information policy and ethical implications of our expanding search engine society

**Method of Instruction & Learning:**

- Online viewing of recorded lectures and related videos, online discussion and chat.

### **Prerequisites:**

- Junior standing (undergraduates), L&I SCI 501 (graduate students), or permission of instructor

### **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.
- *Technological Knowledge and Skills*: The application of information, communication, assistive, and related technology and tools consistent with professional ethics and prevailing service norms and applications.

### **Course Materials:**

- Required text: (available at UWM Bookstore, or online)
  - o Halavais, A. (2008). *Search Engine Society*. Cambridge: Polity.
- Recommended texts: (selected chapters will be available on D2L, but you might be interested in entire text)
  - o Battelle, J. (2005). *The search: How Google and its rivals rewrote the rules of business and transformed our culture*. New York: Portfolio.
  - o Vaidhyanathan, S. (2011). *The Googlization of everything (And why we should worry)*. Berkeley, CA: University of California Press.
- All additional readings available via D2L

### **Course Schedule:**

#### **Week 1 Introduction to the Course**

Topics: Introductions; course content, expectations & deliverables

#### **Week 2 Introductory Concepts & Concerns**

Topics: Overview of search engines and social impacts

Readings:

- Halavais, "Introduction"
- Vaidhyanathan, "Introduction: The Gospel of Google"
- Screening: "Google: Behind the Screen"

#### **Week 3 Early Searching**

Topics: Explore the history of searching online

Readings:

- Bush, V. (1945). As we may think. *The Atlantic Monthly*, 176(1), 101-108.
- Halavais, Ch. 1 "The Engines"
- Battelle, Ch. 3 "Search Before Google"

#### **Week 4 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>
- Sullivan, D. (2002). How search engines work. *SearchEngineWatch*.  
<http://searchenginewatch.com/showPage.html?page=2168031>

- Week 5 \***      **The Search Economy**  
 Topics:      How do search engines make money, and others make money within the search ecosystem  
 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*
- Week 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.
- Week 7 \***      **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>.  
                      - Thompson, C. (2006, Apr. 23). “Google's China Problem (and China's Google Problem)” *New York Times Magazine*.  
                      <http://www.nytimes.com/2006/04/23/magazine/23google.html>  
                      - Various web articles on Michelle Obama image controversy (D2L)
- Week 8 \***      **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.
- Week 9**      **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 protection?  
 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.

**Week 10 \* Google Book Search: Overview & Reactions**

Topics: What is the Google Book Search project, what sparked legal action, and overview of the proposed Settlement Agreement?

- Readings:
- Band, J. (2008). "A Guide for the Perplexed: Libraries & the Google Library Project Settlement"
  - Vaidhyanathan, Ch. 5 "Googlization of Knowledge: The Future of Books"
  - ALA, ACRL, ARL Google Book Settlement briefs (skim), and various links on D2L
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**Week 11 \* Google Book Search: Copyright, Privacy & Intellectual Freedom**

Topics: What are the potential impacts of the Google Book Search project and proposed Settlement Agreement on copyright, privacy and the right to read anonymously?

- Readings:
- Center for Democracy & Technology (2009). Privacy Recommendations for the Google Book Search Settlement. [http://cdt.org/copyright/20090727\\_GoogleRecs.pdf](http://cdt.org/copyright/20090727_GoogleRecs.pdf)
  - 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.
  - Zimmer, M. (2012). The Ethical (Re)Design of the Google Books Project. *Proceedings of the 2012 iConference*, 363-369

**Week 12 Regulating Search?**

Topics: Considering all we've discussed in class, is there a need – or even the possibility – of regulating search engines?

- 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)

**Week 13 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>

**Week 14 Individual meetings to discuss paper proposal**

**Week 15 Final research paper due**

## **Course Elements:**

### **1. Written Responses:**

- a. Students must submit written responses to the assigned readings for the 6 weeks indicated with an “\*” on the course schedule. Reflection questions will be distributed at the beginning of those weeks via D2L. Total length of responses should be approximately 250-500 words for undergraduate, 500-750 for graduate students; 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.
- b. Each response can earn up to 3 points: (partial points may be awarded)
  - 3 points: thought-provoking, showed thorough understanding of the topic, referenced passages or concepts from assigned reading
  - 2 points: was responsive to the question, but only marginally connected to the assigned reading and didn’t show effort to think beyond the simple answer
  - 1 point: unresponsive to the question, showed a lack of reading the assigned material

### **2. Weekly Discussion Leader (graduate students only):**

- a. Graduate students will be assigned to at least one course session to present their written responses (for the weeks assigned) in class to spark discussion. Along with answering the required response questions, 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 12:00pm (noon) the day before class. Discussion leaders will be graded based on quality of the questions posed, preparation, and overall performance during the class session.

### **3. Participation:**

- a. All students are expected to actively and constructively participate in class through the weekly discussion threads created by the Discussion Leader (above). I will be tracking contributions by each student for the “Participation” grade element. If you make well-informed and relevant contributions on a consistent basis, then you should score very well (simply posting a response of “I agree” is not sufficient). However, do not feel you need to hog the discussion – online discussion benefits from quality over quantity.
- b. In order to accomplish participate constructively, it is imperative that you prepare for discussions – do the readings in advance, and jot down questions or things you disagree with to bring up online. Then, track the discussion and provide any additional comments as needed.
- c. Participation might also include assorted worksheets or short written responses as assigned.

### **4. News Commentary:**

- a. At some point during the semester, all students will be expected to find and discuss a current event or news article that involves a search engine company, controversy, or other relevant issue. News stories can be found via your preferred online news source, from a search engine company’s own blog, or related sources.
- b. The commentary should be between 300 and 500 words, providing a brief synopsis of the news or event, and effectively discuss how it relates to issues addressed in the course. Each student must post their commentary on D2L for other members of the class to see, and will be discussed in class. This assignment must be completed prior to week 13.

### **5. Research Paper:**

- a. Students will be required to write a research paper in lieu of a final exam. The paper will focus on one of the broad topics discussed in class, describing 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. You must cite readings used in class, as well as reliable and appropriate sources found elsewhere.
- b. Students are required to write a brief proposal for their final research paper (graded for credit). The proposal 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 (use the library databases and scholarly sources, along with news and online sources). Length should be 250-400 words. Feedback will be provided on the proposal during in-person meetings in week 14 to guide your progress on the final paper.
- c. Final papers are due in week 15. Requirements vary:
  - i. *Undergraduate* students will be required to write 8-10 pages, which will be more descriptive in nature (what is the nature of the debate).
  - ii. *Graduate* students will be required to write 12-15 pages, and will need both describe the issue, as well as articulate and defend their own position on the topic; thus, a more normative paper (what is the nature of the debate, and argue for what you think is right or should be done).

### **Class Policies:**

<u>Credit Breakdown:</u>	<u>UG</u>	<u>GR</u>	<u>Grading Scale:</u>			
Attendance & Participation	20%	10%	A	94-100	C	74-77
Written Responses	20%	10%	A-	91-93	C-	71-73
Discussion Leadership		10%	B+	88-90	D+	68-70
News Commentary	20%	20%	B	84-87	D	64-77
Research Paper Proposal	10%	10%	B-	81-83	D-	60-63
Research Paper	30%	40%	C+	78-80	F	0-59

### **Evaluation Rubric:**

- Below is a general description of how grades are assigned for required course elements. Pluses and minuses may be employed to fine-tune the evaluation. In this grading scheme, a "B," for example, is not a subtraction from an initial state of an "A," but rather recognition of good and thorough work. Grades will be reduced for late assignments, with no guarantee for any credit for late submission.

*A = Excellent; you “wow”-ed me.* Work demonstrates impressive understanding of readings, discussions, themes and ideas. Written work is fluid, clear, analytical, well organized and grammatically polished. Reasoning and logic are well grounded and examples precise. “A” quality work cites outside materials, draws connections between topics from multiple sessions, and generally impresses.

*B = Good; a clear understanding of the topic.* Work demonstrates a thorough and solid understanding of readings, discussions, themes and ideas. Written work is clear and competent, but is somewhat general, a bit vague, or otherwise lacking in precision. While analytical, writing presents more description than analysis. Arguments are solid but not thoroughly original or polished.

*C = Fair; shows limited understanding, or limited amount of effort.* Work demonstrates a somewhat fragmented understanding of readings, discussions, themes and ideas. Shows acquaintance with readings and ideas, but not intellectual engagement. Written work is choppy and argument somewhat difficult to follow, examples are vague or irrelevant, and ideas are imprecise. Work veers toward underdeveloped ideas, off-topic sources or examples, personal anecdotes, creative writing, memoir, etc.

*D = Unsatisfactory.* Work demonstrates little understanding or even acquaintance with readings, discussions, themes and ideas. Written work is choppy, fractured and unclear. Submission has little logical development, and reveals little effort to really engage.

*F = Failure / Unacceptable.* Work does not demonstrate understanding of topics, ideas and readings. This is also the grade for work not submitted and plagiarized work.

#### 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.

#### Assignments:

- All written assignments must be turned in on time to the appropriate D2L dropbox or discussion thread. Late submissions will not be allowed except for a confirmed emergency with instructor's pre-approval.
- Papers 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:

- Via chat: I will respond to class-related instant message chats via Google Chat/Jabber protocol (find me at michael.zimmer@gmail.com) during normal work hours, and occasionally in the evenings – if you see me online, feel free to send a message. When contacting me via chat, please be sure to introduce yourself by name and as a student in this class. Some course business is more suitable for an email or face-to-face discussion, thus I might defer the discussion appropriately.
- 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. For example, don't start your e-mail with "Hey Mike" or end with "Kthxbai!" (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 available for face-to-face discussions for local students by appointment.

## **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/](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/](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](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.
- **Incompletes.** 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](http://www.uwm.edu/Dept/SecU/acad%2Badmin_policies/S31.pdf)).
- **Discriminatory conduct (such as sexual harassment).** 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](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.
- **Academic misconduct.** 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.



- Complaints. 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.
- Grade appeal procedures. 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](http://www.uwm.edu/Dept/SecU/acad%2Badmin_policies/S28.htm)).
- Examinations, Finals. 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](http://www.uwm.edu/Dept/SecU/acad+admin_policies/S22.htm)).
- D2L and Student Privacy: 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.