General Description
In this course you will learn about basic issues in information science and information studies, including the nature of information, information services, information professions, information policy, information ethics, and the complex relationships between information technologies and society.

Competencies
Upon successful completion of the course, you will be able to:
1. Identify and be able to relate concepts of information science and information studies;
2. Describe various institutions and technologies for the organization, storage, and retrieval of information, and identify these structures in light of a particular system.
3. Connect current information-based institutions and technologies to their historical roots and with their cultural, political, and economic settings.
4. Apply general knowledge of current issues in information technologies, the information professions, information policy, and information ethics.
5. Illustrate the impact of the development of technology on access to and use of information and the changes that this development causes in the structure and operation of society.
6. Synthesize varied case information for a deeper analysis of particular examples of information systems.
7. Collaborate in evaluating information systems in terms of their data acquisition, information organization, computing and display, as well as their social impacts.

Course Details
Required Textbook: None, readings will be provided in Canvas.
Required Materials: One set of 3x5” index cards. IF you have a smart device/phone, please add the Kahoot app to it.
Prerequisites: None
Workload: Study leading to 1 semester credit represents an investment of time by the average student of not fewer than 48 hours for class contact in lectures, for laboratories, examinations, tutorials and recitations, and for preparation and study; or a demonstration by the student of learning equivalent to that established as the expected product of such a period of study. Thus, this 3-credit class will involve approximately than 144 hours of work, or 9 hours per week, 2.5 of which occur in the classroom. The actual amount of time required will vary according to the experience and expertise of the student.
Course Policies & Details

Method of Instruction and Learning
This class involves experiential and peer-based learning, lecture and discussion-based class work, complemented by film & media screenings, as well as readings and social responses to those readings. It involves small group and individual assignments. This style of instruction and learning necessitates that all students participate in class discussions, projects, and activities. Thus attendance is mandatory. The class will be broken up into smaller groups for group work, and for final projects. You will each have one opportunity to lead in-class activities for a small group.

Atmosphere for Learning
Students are encouraged to participate in open and frank discussions of the course material, but are also expected to respect the other students and to engage in discussion and debates in a sensitive and respectful manner. When in doubt, please err on the side of mutual respect in your dealings with all the participants in this course. Many of the topics we will discuss will be controversial and we will aim to explore many sides of each issue. Please be open to exploring and critically assessing your own biases, and the philosophies embedded within the technologies. Also--seats are assigned in this class.

Laptop, Phone, & Device Policy
This course is ABOUT information technologies, and as such welcomes information technology use in the classroom. HOWEVER, recent studies have found that not only does the use of laptops and devices in class act as a barrier for an individual's learning, it also is a barrier for the students around them. This makes using a laptop in a classroom like secondhand smoke. I want to provide the best possible atmosphere for learning, so laptops and other electronic devices are to be left turned off or put away unless we need them for coursework. Of course, if you have any sort of disability that necessitates the use of a laptop or device to take notes, please let me know so I may make accommodations for you.

Your Instructor
Shannon Crawford Barniskis; Please call me Shannon.
Email: crawfo55@uwm.edu.
Office: NWQ-B room 2588
Office hours: 11 am-12 pm Tuesdays and Thursdays. Please feel free to drop by unannounced to ask questions, to get help, to discuss projects or ideas, or just to say hi. Other appointments may be arranged via email.

You Contacting Me & Me Contacting You
Email is the best way to contact me. I will respond to class-related emails during normal work hours, (not during weekends or after 8 pm) and will generally reply with 24 hours. Please be sure to use your UWM e-mail account, identify yourself and the course.

Your email & Canvas: You should check your UWM email and Canvas accounts regularly since I use them to keep you informed about any changes to the course. You are responsible for receiving, reading, and responding to any and all email messages and Canvas announcements.

Course Structure
This course is set up with four main components:
1. Identifying what information science and information actually are.
2. Evaluating Augmented Data, Information & Knowledge (ADIK) systems, and how they function.
3. Applying ADIK concepts in analyzing information systems in particular cases.
4. Assessing a particular ADIK in light of the acquisition, processing, organization and display of information, as well as social impacts of the system, in a group project.

What a Week in This Class Might Look Like
Monday: Do your readings in advance of class and be sure to have done your reading responses as well. Check for any class news. Prepare for any upcoming assignments.
Tuesday: Come to class having already read and responded to your assigned readings. Do brief writing activities, listen to lectures or watch films, do group activities, participate in discussions. Learn ethics by doing ethics.
Wednesday: Same as Monday
Thursday: Same as Tuesday.
Friday-Sunday: Ensure you’ve finished all your readings, responses, and assignments. Work on your group project if you’re at that point. Uploaded any assignments that are due by Sunday at 11:59 pm CST. Make sure you take some time to spend with family and friends, and take care of yourself too! Expect to spend about 6-8 hours a week outside of class-time, doing work for this course.

https://xkcd.com/1289/
Attendance Policy
Life happens. Thus you may miss up to three class sessions without penalty (these are still considered “unexcused” absences if they do not fulfill the “excused absences” policy below. After that, each unexcused absence involves 4% subtracted from your overall grade. This generally entails one letter grade, A to A- for example. If you miss 3 or fewer classes, you will be granted a bonus 4% or letter grade bump. Because showing up matters!

These grade adjustments occur independently of the grading of in-class activities, which cannot be made up unless in the case of an excused absence. Adjustment for attendance will occur at the end of the semester when all absences are recorded. It is the student’s responsibility to keep track of their absences. Unless covered by the excused absences policy or an ARC plan, you may not make up work in-class.

Excused Absences
Excused absences must receive instructor approval. Student should apply for an excused absence if the absence (1) was for a family or personal emergency, (2) occurred at such a time as to prevent the student from reasonably attending class, and (3) can be appropriately documented. Documentation examples: statement of military/jury service, documentation by a professional service worker, medical documentation. Requests are due 2 weeks from the student’s return and prior to the last day of class.

If you have a scenario in which:
- Your dog is lost and you’re looking for her
- You ran out of gas on the way to class
- Your child is feeling unwell but didn’t go to the doctor
- You slept through an alarm...
and other similar situations, you have my deepest sympathy, but you do NOT have an excused absence. That is what the 3 “life happens” grace days are intended to help in these situations, though in-class work cannot be made up.

Special Considerations
Please don’t ask for extensions, make-up assignments, or special extra credit. Here is UWM’s policy on “special consideration,” which I strive to follow closely:

Special Consideration. The principle of equal treatment of all students shall be a fundamental guide in responding to requests for special consideration. No student should be given an opportunity to improve a grade that is not made available to all members of the class. This policy is not intended to exclude reasonable accommodation of verified student disability, or the completion of work missed as the result of religious observance, verified illness, or justified absence due to circumstances beyond the student’s control.

http://www4.uwm.edu/secu/policies/saap/upload/S29.htm

What is an Information System?
Consider Google Home. It is an information system that senses your intent from your voice by using it’s natural language processing, driven by its machine learning project, then acquires information from the internet using Google’s ginormous data servers, organizes it usefully using Google’s algorithm until the keywords you speak trigger recall of some specific information, then it displays the information to you in the form of an answer. In this class we’ll call this an ADIK: an Augmented Data, Information & Knowledge system.

Accommodations for Disabilities
If you need accommodations for disabilities, please let me know immediately. This is your responsibility, and I will need certification from Accessibility Resource Center. I want to be able to accommodate your needs and make this course as accessible as possible for you, and an ARC plan allows me the power to do so. However, it is the student’s responsibility to have this plan in place, in writing, from the ARC center BEFORE requesting any accommodations. I cannot accommodate disabilities without the ARC documentation.

Grading Policy
Please do NOT put your name on assignments--I like to grade “blind.” In addition, some assignments will be graded by other students in class. Also, I know how much work students put into their assignments and projects, as well as how anxious a student can become if they do not know how they are doing in a class. My policy is to return things as swiftly as possible. Any appeals to grades must be done in person [no email] within a week of an assignment being returned, and the instructor’s word is final, unless the student chooses to appeal under UWM policy (see p. 8). Please see the Academic Misconduct policy on p. 7.
<table>
<thead>
<tr>
<th>Week</th>
<th>Dates</th>
<th>Activities</th>
</tr>
</thead>
</table>
| 1    | 1/22, 1/24 | 1.1 Introduction to the Course  
1.2 What is Information?  
1.1: Review Syllabus // Read any one (or more) of the recommended readings  
1.2 Information machine // Barlow // Debons, Ch.1 |
| 2    | 1/29, 1/31 | 2.1 The Information Society  
2.2 Information Science History  
2.1: Moore // Links  
2.2: Davis & Shaw, Ch. 2 |
| 3    | 2/5, 2/7  | 3.1 Info Professions & Work  
3.2 Info Access & Digital Divides  
3.1: There’s an app for that // Benson // Links  
3.2: Mathiesen // Making the Internet Affordable // Malcolm |
| 4    | 2/12, 2/14 | 4.1 Info Systems: ADIK overview  
4.2 Data Acquisition  
4.1: Debons, Ch. 4 // APA video  
4.2: Debons Ch. 5 (81-91) |
| 5    | 2/19, 2/21 | 5.1 Info Organization  
5.2 Data Transmission ASSIGNMENT  
5.1: Linked Open Data // Bawden & Robinson Ch. 6  
5.2: Faircloth, Ch. 2 // Links  
ASSIGNMENT due 2/24, 11:59 PM CST |
| 6    | 2/26, 2/28 | 6.1 Computing  
6.2 Databases ASSIGNMENT  
6.1: After Moore’s Law // Video links  
6.2: Faircloth Ch. 4 // in-class project planning  
INITIAL PROJECT PLAN due 3/03, 11:59 PM CST |
| 7    | 3/5, 3/7  | 7.1 Platforms  
7.2 Algorithms & Decision Systems  
7.1: Fisher // Gillespie // Gauntlett  
7.2: Lewis // Sauter [pp. 3-19] // Entire series of Breaking the Black Box  
OFFICE VISITS THIS WEEK |
| 8    | 3/12, 3/14 | 8.1 AI & Machine Learning  
8.2 Human/NonHuman  
8.1: Lewis-Kraus // Do You Trust This Computer?  
8.2: Deng // Hardy // Stinson  
OFFICE VISITS THIS WEEK |
| 9    | 3/17-3/24 | SPRING BREAK  
ENJOY YOUR BREAK! |
| Week 10  | 3/26, 3/28 | 10.1 Data Science & Analytics  
10.2 Big Data  
ASSIGNMENT | 10.1: Cady (pp. 9-17) // EMC (pp.1-24) // Stephens-Davidowitz  
10.2: Videos (Age of Big Data, etc.)  
FINAL PROJECT PLAN due, 3/31, 11:59 PM |
| --- | --- | --- | --- |
| Week 11  | 4/2, 4/4 | 11.1 Privacy  
11.2 Info Security | 11.1: Chew & Stamm // Dwoskin & Timberg // Sly  
11.2: Cybersecurity Workforce Framework // Faircloth Ch. 5 |
| Week 12  | 4/9, 4/11 | 12.1 Ubiquitous Computing  
12.2 Info Ethics & Policy  
ASSIGNMENT | 12.1: Mosco // Cha // IoT examples // Links  
12.2: Marek // Greene // Codes of ethics links  
ASSIGNMENT Due 4/14 11:59 CST |
| Week 13  | 4/16, 4/18 | 13.1 Display & Visualization  
13.2: UX & Design | 13.1: Data visualization links // Lowdermilk  
13.2: Bad Design // Nielson // Links |
| Week 14  | 4/23, 4/25 | 14.1 Bits & Atoms  
14.2 Group Projects | 14.1: Waltz // Petrick & Simpson // peruse MIT’s Center for Bits & Atoms site  
14.2: Work in class on group projects |
| Week 15  | 4/30, 5/2 | Group Projects Presentations,  
ASSIGNMENT | 15.1: Work in class on group projects  
15.2: Present projects  
FINAL PROJECT FILE Due: Wednesday 5/1, 11:59 PM CST |
| Week 16  | 5/7, 5/9 | Group Projects Presentations,  
ASSIGNMENT | 16.1: Present projects  
16.2: Present projects  
Project Review Due 5/11, 11:59 CST |

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https://xkcd.com/2072/


Reading List


Films may include:

Do You Trust This Computer?
We’re Building a Dystopia Just to Make People Click on Ads
The Era of Blind Faith in Algorithms Must End
Why Privacy Matters
It’s Getting Harder to Spot a Deep Fake Video
Learning Activities & Assessment

Reading Response Competencies 1-7, 25 pts
You are required to respond to class materials online, mostly via the Persuall app, or in Canvas. These social responses help you learn from the readings & from each other. 5+ quality responses for credit for most items. Due on the readings’ assigned day, by class start. You will be leading response activities in one class.

In-Class Activities Competencies 1-7, 30 pts
Most days will include very brief writing assignments. You will need a pack of index cards for these. Discussions and other in-class activities will also occur. These activities, are all graded every class session. Thus each absence from class not only harms your own grade significantly, but also impacts the learning of other students.

Diving In Competencies 1 & 3, 10 pts
What is your system all about? History, development, audience. You will also create an annotated bibliography about your system with at least 4 scholarly articles, and 3 non-scholarly ones, focused on the issues that interest you.
Due 2/24 11:59 PM CST in Canvas.

Data Acquisition, Organization & Computing Competency 2, 4, 10 pts
How is information acquired and organized in your system? Databases, knowledge organization, information retrieval
How does your system compute? Analytics, machine learning, AI, and algorithms.
Due 4/14 11:59 PM CST in Canvas.

Final Project Plan Competencies 5, 6, & 7, 10 pts
Your group project requires a scheduled office visit with your entire group, to discuss your project plan. Office visit dates will be arranged between 3/5 and 3/14.
Initial plan due 3/03 11:59 PM CST in Canvas.
Final plan due 3/31 11:59 PM CST in Canvas.

Final Project 15 pts Competencies 5, 6, & 7
This is a group project. Your group will have an option between presenting a poster, or presenting a powerpoint. You will be selecting the topics of interest to you at the beginning of the course, and your assignments will relate to that system. You will touch on the various aspects of ADIKs but then focus on the social impacts and issues surrounding your system.
Sample topics include: Twitter, Netflix, Internet-connected light bulbs, and so on.
You will be creating a presentation that assesses some information system, and sharing that with the class and/or other groups. You MUST attend your presentation and the presentations of those you are reviewing for credit.
Project file(s) due WEDNESDAY 5/1 by 11:59 PM CST, in Canvas. Presenting 5/2, 5/7, 5/9, in class. Reviews due 5/11 in Canvas.

Credit Breakdown
In-Class Activities 30%
Assignments 20%
Reading Responses 25%
Final Project 25%

Grading Scale

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>94-100</td>
</tr>
<tr>
<td>A-</td>
<td>91-93</td>
</tr>
<tr>
<td>B+</td>
<td>88-90</td>
</tr>
<tr>
<td>B</td>
<td>84-87</td>
</tr>
<tr>
<td>B-</td>
<td>81-83</td>
</tr>
<tr>
<td>C+</td>
<td>78-80</td>
</tr>
<tr>
<td>C</td>
<td>74-77</td>
</tr>
<tr>
<td>C-</td>
<td>71-73</td>
</tr>
<tr>
<td>D+</td>
<td>68-70</td>
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<tr>
<td>D</td>
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<tr>
<td>D-</td>
<td>60-63</td>
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<tr>
<td>F</td>
<td>0-59</td>
</tr>
</tbody>
</table>

https://xkcd.com/1215/
## 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://www4.uwm.edu/dos/student-handbook.cfm

## 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://www4.uwm.edu/accessibility

## 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://www4.uwm.edu/secu/docs/other/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, including provisions for refunds, readmission, grading, and other situations.  
https://uwm.edu/active-duty-military/

## Academic misconduct

Cheating 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 linked document or contact the SOIS Investigating Officer (currently the Associate Dean) for more information.  
https://uwm.edu/academicaffairs/facultystaff/policies/academic-misconduct/

## Complaints

Students may direct complaints to the head of the academic unit or department in which the complaint occurs. If the complaint allegedly violates a specific university policy, it may be directed to the head of the department or academic unit in which the complaint occurred or to the appropriate university office responsible for enforcing the policy.  
https://www4.uwm.edu/secu/docs/other/S_47_Discrimina_duct_Policy.pdf

## 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://www4.uwm.edu/secu/docs/other/S22.htm

## Canvas & Student Privacy

This course utilizes CANVAS to facilitate online learning. CANVAS provides instructors the ability to view both individual data points and aggregate course statistics, including the dates and times individual students access the system, the pages a student has viewed, duration of visits, and the IP address of the computer used to access the course. 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.  
http://www4.uwm.edu/secu/docs/other/S522.htm
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 substantiated cause beyond the student’s control, has been unable to take or complete the final examination or to complete some limited amount of term work.

https://www4.uwm.edu/secu/docs/other/S_31.INVISIBLE GRADES.pdf

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 the established procedures adopted by the department, college, or school in which the course resides or in the case of graduate students, the Graduate School. These procedures are available in writing from the respective department chairperson or the Academic Dean of the College/School.

http://www4.uwm.edu/secu/docs/other/S28.htm

Discriminatory conduct, Title IX/Sexual Violence, GSM/LGBTQ+ resources

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 summarizes and defines situations that constitute discriminatory conduct. If you have questions, please contact an appropriate SOIS administrator.

https://www4.uwm.edu/secu/docs/other/S_47_Discrimination_Policy.pdf

UWM policy prohibits discriminatory conduct, including sexual violence, which may include sexual harassment, sexual assault, relationship violence, and/or stalking in all educational programs and education-related areas. UWM strongly encourages its students to report any instance of sex discrimination to UWM’s Title IX Coordinator [titleix@uwm.edu]. Whether or not a student wishes to report an incident of sexual violence, the Title IX Coordinator can connect students to resources at UWM and/or in the community including, but not limited to, victim advocacy, medical and counseling services, and/or law enforcement.

http://www4.uwm.edu/secu/docs/other/S22.htm

There are many resources available for GSM/LGBTQ+ communities and individuals, please look into them here:

https://www4.uwm.edu/secu/docs/other/S_47_Discrimination_Policy.pdf

Need Other Help?

Check out The Writing Center
The Writing Center is open to all UW-Milwaukee writers, current freshmen through graduate students, staff and faculty. Whether face to face or online in real time, you can meet one on one and confidentially with a qualified tutor to discuss any kind of writing project. All subjects and skill levels are welcome. Schedule help EARLY in the semester. Really. My advice is: for all your courses, make appointments early on, so you don’t have a problem at the end of the semester when everyone else is also seeking help. Locations: Curtin Hall 127; Library East Wing http://www4.uwm.edu/writingcenter

CANVAS Help
For help in working with Canvas, go to: https://kb.uwm.edu/cetl/internal/page.php?id=82928

PASS
Panther Academic Support Services can make a huge difference. If you feel like you’re just not doing as well as you’d hoped, they provide all kinds of support groups, tutoring, software, and other help.

http://www4.uwm.edu/pass/
Send PASS a Text: Send your question or request via SMS to [414] 97-EXCEL or [414] 973-9235

Ask a Librarian
Many students think they never need enter the library, and that they can accomplish all the research they need online. But often the library has resources and help you have no idea even exists. Just speaking to a research librarian can make projects go far more simply, because they can often think of other search terms or resources that you don’t know about. Visit the Ask a Librarian Desk, (located on the first floor, west wing) for help using the library, and/or get in-depth assistance with a research consultation:

http://uwm.edu/libraries/user-services/consultation/

Help a Brother or a Sister Out?
See if you can gather the email addresses or phone numbers of a couple of other people in this course to call upon if you’re confused about something, would like to look at someone’s notes, or would like to set up a study group.

Name_______________________________
Contact Info__________________________

Name_______________________________
Contact Info__________________________