Example Syllabus
Designing Knowledge
FIS 335

Prof. Clark A. Miller
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Office: PE West 126B
Office Hours: MWF 10:00-12:00 or by appointment

Course description: This course is designed to provide students with a foundational understanding of how social organizations make and use knowledge. From research laboratories to biotechnology companies to statistical agencies, many organizations are specifically designed to be knowledge enterprises: enterprises whose primary purpose is to produce knowledge. All organizations in modern societies also operate knowledge systems: systems whose purpose is to create, validate, circulate, communicate, and apply knowledge in the making of decisions. In this course, we will examine how these forms of organization work and contribute to modern societies.

Course objectives and learning outcomes: In this course, students will learn:

- The organization of knowledge-making as a human and social institution
- The structure and dynamics of knowledge enterprises and systems
- Approaches and techniques for analyzing knowledge enterprises and systems (e.g., epistemological, ontological, functional, structural, political, etc.)
- Approaches and techniques for analyzing uncertainty, ignorance, and other kinds of non-knowledge
- The performance of credibility in knowledge enterprises and systems
- The roles of knowledge and uncertainty in organizational, social, economic, and policy decision-making
- The social regulation of knowledge-making processes and organizations

Course Requirements:

- Exams (20%). The course will have two exams. Each will be worth 10% of your grade. Exams will take place during class and consist of identification and short answer questions. Identification questions will be drawn from the class readings. Short answer questions will be based on the course lecture.
- Assignments (70%). Each section of the course will have an assignment. Assignments and grading criteria for each paper will be passed out in class. Each will be worth 10%. Papers are due at the beginning of class on the class period immediately following the close of each section.
- Class Participation (10%). You are required to attend class and participate in class discussions, based on class readings. Class readings for a given day must be completed before class in order to allow you to participate in discussions. Class readings contain material that will not be presented in lectures and that may form the basis for test questions.

Barrett students interested in adding an honors contract to the class should contact the instructor in the first week of classes.
Grading Scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Score Range</th>
<th>Description</th>
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<tbody>
<tr>
<td>A-</td>
<td>90.0-92.4</td>
<td>Excellent</td>
</tr>
<tr>
<td>A</td>
<td>92.5-97.9</td>
<td>Excellent</td>
</tr>
<tr>
<td>A+</td>
<td>98-100</td>
<td>Excellent</td>
</tr>
<tr>
<td>B-</td>
<td>80.0-82.4</td>
<td>Good</td>
</tr>
<tr>
<td>B</td>
<td>82.5-87.4</td>
<td>Good</td>
</tr>
<tr>
<td>B+</td>
<td>87.5-89.9</td>
<td>Good</td>
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<tr>
<td>C</td>
<td>70.0-77.4</td>
<td>Average</td>
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<tr>
<td>C+</td>
<td>77.5-79.9</td>
<td>Average</td>
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<tr>
<td>D</td>
<td>60.0-69.9</td>
<td>Passing</td>
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<tr>
<td>E</td>
<td>&lt;60</td>
<td>Failure</td>
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<tr>
<td>XE</td>
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<td>Failure due to Academic Dishonesty</td>
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[Note: in order to receive University Distribution requirement credit you must earn at least a “C.”]

Course Calendar:

Weeks 1 and 2. Defining Knowledge and Knowledge-Making

**Goals and Objectives:** You will learn to define knowledge, drawing on, differentiating, and synthesizing multiple disciplinary approaches to the study and analysis of knowledge from the humanities (e.g., philosophy), social sciences (e.g., anthropology), and natural sciences (e.g., information science). You will also learn to analyze the making of knowledge as a form of work, involving people in a variety of different roles (e.g., scientists, accountants, technicians, research subjects). Concepts of uncertainty will also be discussed.


**Assignment:** Your first assignment has two parts. For part one, you must select and have approved by the professor a knowledge system or knowledge enterprise that will serve as the case of your research throughout the semester. Due before the first class of week 2. For part two, prepare a 1-page, single-spaced analysis of how your selected case defines knowledge. Due on the final class of week 2.

Weeks 3 and 4. The Roles of Knowledge in Modern Organizations and Societies

**Goals and Objectives:** You will learn to analyze knowledge and knowledge-making as a key element in the organization of modern societies. This will include the roles of knowledge both internal to organizations (e.g., thinking about knowledge management and supply chain management as a tool for companies) and in the larger social and political dynamics of societies (e.g., the role of statistics and experts in government decision-making). The rise of big data will be discussed.


**Assignment:** Prepare a 2-page, single-spaced analysis of the role that your selected knowledge system case plays either for an organization or more broadly in society.

Weeks 5 and 6. Introduction to Knowledge Systems and Enterprises: The Organization of Knowledge-Making
Goals and Objectives: You will learn to define knowledge systems and enterprises, as well as to define and apply basic concepts and tools for analyzing knowledge systems and enterprises. Particular emphasis will be placed on a structural/functional analysis, including knowledge creation, validation, synthesis, communication, and application. Major categories of knowledge systems and enterprises in contemporary societies (e.g., research laboratories, field sites, modeling centers, statistical agencies, etc.) will be discussed, including analyses of the similarities and differences across them.


Assignment: Produce a 2-page, single-spaced description of knowledge creation, validation, synthesis, communication, and application in your selected case.

Mid-term Exam.

Weeks 7 and 8. The Epistemic Organization of Knowledge Systems and Enterprises

Goals and Objectives: You will learn to analyze the epistemological (how the system knows) and ontological (what the system knows about) features of knowledge systems and enterprises, including such dimensions as styles of reasoning, forms and norms of evidence, classificatory frameworks, notions of expertise, and others. The emphasis of this section is on describing and assessing the knowledge content being generated by the system, as well as considerations of uncertainties, gaps, tacit assumptions, and other shortcomings of the knowledge generated.


Assignment: Prepare a 2-page, single-spaced analysis of the epistemological and ontological dimensions of your case.

Weeks 9 and 10. The Social and Institutional Organization of Knowledge Systems and Enterprises

Goals and Objectives: You will learn to analyze the social and institutional processes and structures that constitute knowledge systems and enterprises, including especially the forms of labor and work involved and their differentiation; social relationships, networks, and organization characteristic of participants; institutional organization and design; professionalization; etc.


Assignment: Prepare a 2-page analysis of the social and institutional processes that comprise your selected knowledge system or enterprise.

Weeks 11 and 12. The Economics of Knowledge Systems and Enterprises
**Goals and Objectives:** You will learn basic aspects of the economic dimensions of knowledge systems and enterprises, including the costs of knowledge systems operations, intellectual property systems and arrangements, knowledge markets, the organization of an innovation economy, etc. Particular attention will be paid to the information technology and biotechnology sectors (including the history of the pharmaceutical industry) as illustrations of the economics of knowledge systems and the role of knowledge enterprises in the innovation economy.


**Assignment:** Prepare a 2-page analysis of one of the economic dimensions of your selected case.

Weeks 13 and 14. The Politics of Knowledge Systems and Enterprises

**Goals and Objectives:** You will learn basic aspects of the political dimensions of knowledge systems and enterprises, including the role of knowledge in political institutions, political conflict surrounding knowledge and expertise, the mobilization of knowledge and expertise by governments, conflicts between different forms of knowledge-making (e.g., science and indigenous knowledge), etc. Particular emphasis will be placed on the politics of technical decisions, especially in pluralistic political environments, and the politics and organization of expert advisory institutions in contemporary democratic governance.


**Assignment:** Prepare a 2-page analysis of one aspect of the politics of knowledge associated with your selected case.

**Final Exam.**

*This syllabus is subject to change. It is your responsibility to read e-mail updates from the instructor and TAs as well as check the blackboard site for alterations made as events occur.*

**Incompletes:** A mark of "I" (incomplete) can be given by the instructor when you are otherwise doing acceptable work but are unable to complete the course because of illness or other conditions beyond your control. You are required to arrange with the instructor for the completion of the course requirements. The arrangement must be recorded using the form at [http://students.asu.edu/forms/incomplete-grade-request](http://students.asu.edu/forms/incomplete-grade-request). Students should be proactive and discuss this with their instructor and TA before the end of the semester. Students who do not complete this form before the end of the semester cannot be given an incomplete and will be awarded a grade based on the work they have completed.

**Late Assignments:** Late assignments will have 1/3rd of a letter grade deducted each day they are late. Advanced written or e-mailed notice that you will miss a class or have to turn in an assignment late could help your cause.

**Grade Appeals:** ASU has formal and informal channels to appeal a grade. If you wish to appeal any grading decisions, please see: [http://catalog.asu.edu/appeal](http://catalog.asu.edu/appeal)
**Student Standards:** Students are required to read and act in accordance with university and Arizona Board of Regents policies, including: The ABOR Code of Conduct: Arizona Board of Regents Policies 5-301 through 5-308; [http://www.azregents.edu/policymanual/default.aspx](http://www.azregents.edu/policymanual/default.aspx)

**Professionalism in the Classroom:** While learning happens throughout ASU, the classroom is a particularly important focal point. Students are asked to contribute to a collegial atmosphere where ideas can be exchanged, discussed, and debated freely by avoiding disruptions through their own behavior and the distractions of their technology. Disruptive, threatening or violent behavior will be dealt with according to the policies in the Student Services Manual, SSM 104–02. Students wishing to record lectures electronically must first get permission from the instructor.

It is impossible to learn from your fellow students when you or they are not there. As such attendance is required in this course. Should you have to miss a class, contact your instructor as far in advance as possible. Depending on the nature of the absence the instructor may elect to deduct points from your overall grade. Absences can be excused for religious observance or practices that are in accord with ACD 304–04 or university sanctioned events/activities that are in accord with ACD 304–02.

**Academic Integrity:** Academic honesty is expected of all students in all examinations, papers, laboratory work, academic transactions and records. The possible sanctions include, but are not limited to, appropriate grade penalties, course failure (indicated on the transcript as a grade of E), course failure due to academic dishonesty (indicated on the transcript as a grade of XE), loss of registration privileges, disqualification and dismissal. For more information, see [http://provost.asu.edu/academicintegrity](http://provost.asu.edu/academicintegrity).

If you fail to meet the standards of academic integrity in any of the criteria listed on the university policy website, sanctions will be imposed by the instructor, school, and/or dean. Academic dishonesty includes borrowing ideas without proper citation, copying others’ work (including information posted on the internet), and failing to turn in your own work for group projects. Please be aware that if you follow an argument closely, even if it is not directly quoted, you must provide a citation to the publication, including the author, date, and page number. If you directly quote a source, you must use quotation marks and provide the same sort of citation for each quoted sentence or phrase. You may discuss assignments with other students, however, all writing that you turn in must be done independently. If you have any doubt about whether the form of cooperation you contemplate is acceptable, ask the TA or the instructor in advance of turning in an assignment. Please be aware that the work of all students submitted electronically can be scanned using SafeAssignment, which compares them against everything posted on the internet, online article/paper databases, newspapers and magazines, and papers submitted by other students. Turning in an assignment (all or in part) that you completed for a previous class is considered self-plagiarism and falls under these guidelines. Any infractions of self-plagiarism are subject to the same penalties as copying someone else’s work without proper citations. Students who have taken this class previously and would like to use the work from previous assignments should contact the instructor for permission to do so.

**Prohibition of Commercial Note Taking Services:** In accordance with ACD 304-06 Commercial Note Taking Services, written permission must be secured from the official instructor of the class in order to sell the instructor’s oral communication in the form of notes. Notes must have the note taker’s name as well as the instructor’s name, the course number, and the date.

**Student Support and Disability Accommodations:** In compliance with the Rehabilitation Act of 1973, Section 504, and the Americans with Disabilities Act of 1990, professional disability specialists and support staff at the Disability Resource Center (DRC) facilitate a comprehensive range of academic support services
and accommodations for qualified students with disabilities. **Qualified students with disabilities may be eligible to receive academic support services and accommodations.** Eligibility is based on qualifying disability documentation and assessment of individual need. Students who believe they have a current and essential need for disability accommodations are responsible for requesting accommodations and providing qualifying documentation to the DRC. Every effort is made to provide reasonable accommodations for qualified students with disabilities. Qualified students who wish to request an accommodation for a disability should contact their campus DRC at: [http://www.asu.edu/studentaffairs/ed/drc/](http://www.asu.edu/studentaffairs/ed/drc/) If you are a student in need of special arrangements we will do all we can to help, based on the recommendations of these services. For the sake of equity for all students, we cannot make any accommodations without formal guidance from these services.

**Sexual Violence and Harassment:** Title IX is a federal law that provides that no person be excluded on the basis of sex from participation in, be denied benefits of, or be subjected to discrimination under any education program or activity. Both Title IX and university policy make clear that sexual violence and harassment based on sex is prohibited. An individual who believes they have been subjected to sexual violence or harassed on the basis of sex can seek support, including counseling and academic support, from the university. If you or someone you know has been harassed on the basis of sex or sexually assaulted, you can find information and resources at [http://sexualviolenceprevention.asu.edu/faqs/students](http://sexualviolenceprevention.asu.edu/faqs/students).

**Drop and Add Dates/Withdrawals:** Please refer to the academic calendar on the deadlines to drop/withdraw from this course. Consult with your advisor and notify your instructor if you are going to drop/withdraw this course. If you are considering a withdrawal, review the following policies: Withdrawal from Classes, Medical/Compassionate Withdrawal.

**Email Communications**

All email communication for this class will be done through your ASU email account and the blackboard site. You should be in the habit of checking your ASU email regularly as you will not only receive important information about your class(es), but other important university updates and information. You are solely responsible for reading and responding if necessary to any information communicated via email. For help with your email go to: [http://help.asu.edu/sims/selfhelp/SelfHelpHome.scam?dept_pk=822](http://help.asu.edu/sims/selfhelp/SelfHelpHome.scam?dept_pk=822) and file a help desk ticket by clicking on “My Help Center.”

**Campus Resources:** As an ASU student you have access to many resources on campus. This includes tutoring, academic success coaching, counseling services, financial aid, disability resources, career and internship help and many opportunities to get involved in student clubs and organizations.

- Tutoring: [https://tutoring.asu.edu/tutoring](https://tutoring.asu.edu/tutoring)
- Counseling Services: [http://students.asu.edu/counseling](http://students.asu.edu/counseling)
- Financial Aid: [http://students.asu.edu/financialaid](http://students.asu.edu/financialaid)
- Major/Career Exploration: [https://cls.asu.edu/majorexploration](https://cls.asu.edu/majorexploration)
- Career Services: [http://students.asu.edu/career](http://students.asu.edu/career)