

<b>Shimelis Assefa, Ph.D.</b> <b>Phone: 303.871.6072</b> <b>E-mail: sassefa@du.edu</b> <b>Office Hours: M, W 2-4 pm</b>	<b>Library &amp; Information Science Program</b> <b>Morgridge College of Education</b> <b>1999 E. Evans Ave. Room 248</b> <b>Denver, CO 80208</b>
<b>LIS 4101-1: Information Science (3 Credits)</b> <b>Winter 2011</b>  <b>KRH 306, Wednesday, 4-6:20 pm.</b>	

Course Description (from the catalog)

Survey of historical and contemporary concepts and issues in information retrieval, including text, images and audio/video content. Theory and practice of how knowledge is represented, structured and retrieved in information systems past, present and future. (Prerequisites: LIS 4000, LIS 4010, LIS 4011)

On a further note, this course explores the general phenomena associated with information and information science. The properties of the bibliographic universe, the nature of human interaction in creating, seeking and using the bibliographic universe, and the role of technology in assisting organization and access are core notions around which discussion will be primarily based. The intersection between information science, library science, documentation, and communication studies will also be explored. **Required textbook:**

**Recommended readings:**

Lester, J., & Koehler, W. C. (2007). *Fundamentals of Information Studies: Understanding information and its environment*. 2nd ed. New York: Neal-Schuman.

Raber, D. (2003). *The problem of Information: An introduction to information science*. Lanham, MD: The Scarecrow Press.

Meadow, C.T. (2006). *Messages, meanings, and symbols: The communication of information*. Lanham, MD: The Scarecrow Press.

Additional readings are made available in Blackboard for selected topics (see the Course Readings page).

Learning Objectives:

The general objective of this course is to explore the properties and laws of information, to investigate information science as a science, to find answer on how people relate to, seek, and use information, and the systems and technologies used to render organization and access of information.

Learning outcomes:

upon satisfactory completion of the course, students will be able to:

- Describe and discuss the phenomena surrounding information science as a field of study.
- Explain the relationship between information science, documentation, library science, and communication studies.
- Analyze the phenomenon of information.
- Assess the methods for bibliometrics and citation analysis and their application.
- Describe the various issues involved in information representation.
- Assess key aspects of information retrieval design.
- Identify the various ways in which information visualization techniques can be used.

#### Learning Outcomes:

Upon satisfactory completion of the course, students will be able to:

- Build a conceptual framework of human-information interaction
- Review theories, models, and paradigms in the study of information seeking behavior
- Use theories of information behavior to inform the design of information systems and services
- Discuss patterns of information seeking behavior among different community of users
- Learn methodologies for conducting information seeking research and user studies

#### Course Contents:

The following broad topics will be covered in class discussion and lecture presentation. Check the Class schedule (Page 6) for assignments and due dates.

- Week 1 [1/5]: **Fundamental** concepts of information. What is Information Science and how is it related to Library Science, Documentation, and Communication studies.
- Week 2 [1/12]: **Semiotics** of information science
- Week 3 [1/19]: **Information** theory, Semantics
- Week 4 [1/26]: **Bibliometrics**, Citation analysis, Zipf, Lotka, Bradford
- Week 5 [2/2]: Information representation and the concept of aboutness
- Week 6 [2/9]: **Information** Retrieval and the concept of relevance
- Week 7 [2/16]: Database systems and data structures
- Week 8 [2/23]: **Information** infrastructure, Information Grids
- Week 9 [3/2]: Information visualization
- Week 10 [3/9]: Wrap up, class presentation.

#### Presentation and Evaluation:

The format and presentation of this course involves lectures, seminar, and student presentation. Evaluation of student performance is primarily based on the students' active participation in the class, individual and group assignments, and discussion. In addition to the face-to-face lecture and discussion, Blackboard will be used to supplement delivery of lecture notes. Description of assignments, course calendar and grading policy, and other announcements are also made via Blackboard.

#### Instructor Responsibilities:

It is my role to engage students in thought-provoking class discussion, present wide-ranging perspectives of

the topics of the course including historical narratives, theory, philosophy, and social and technological issues surrounding the field of information science. As much as I shoulder the responsibility for the creation of a learning environment, I equally recognize it is the collective effort between students and myself that brings the desired classroom dynamics and fulfill the course outcome. I will in general strive to my level best to generate the excitement by promoting critical and creative thinking in order to achieve the stated objective of the course. Finally, I will judge students' performance fairly and in accordance with the grading policy of the school.

### **Student Responsibilities:**

Before coming to class, students are expected to have read, analyzed, and critiqued lecture notes and reading materials in the course schedule. Active class participation is highly encouraged. This course heavily involves seminar and students are advised to attend class regularly in order to achieve the highest degree of benefit. I highly value students' attendance so that they contribute positively to the classroom dynamics. Students are also expected to complete assignments and projects in the manner and format stated in the description of the assignments, and by the due dates. Assignments NOT turned in on the due dates will be subject to points being deducted.

There is, however, flexibility in assignment due dates if personal or professional responsibilities will not allow a student to complete tasks by the due date.

### **University of Denver Honor Code:**

All members of the university community are expected to assume the responsibility of observing certain ethical goals and values as they relate to academic integrity. Essential to the fundamental purpose of the University is the commitment to the principles of truth and honesty. This *Honor Code* is designed so that responsibility for upholding these principles lies with the individual as well as the entire community.

The purpose of this *Honor Code* is to foster and advance an environment of ethical conduct in the academic community of the University, the foundation of which includes the pursuit of academic honesty and integrity. Through an atmosphere of mutual respect we enhance the value of our education and bring forth a higher standard of academic excellence. No member of the University community, including students, faculty, staff and administrators, shall act in any way that could reasonably be construed as an intentional misrepresentation or deception in academic or professional matters.

Students should refer to the *Morgridge College of Education Bulletin* and the University web site for further information on the rationale, authority, and enforcement of the University's Honor Code.

<http://www.du.edu/ccs/honorcode.html>

NOTE: Students who have a disability or require accommodations are encouraged to contact me as well as DU University Disability Services.

### **Course Grades:**

The points awarded for each activity are based on the student's successful completion of the required course work. Required course works for this class include seminar presentation, reading summaries, exploratory

investigation based on literature review, and class participation/ attendance. High expectations have been set for this course. Please notice that outstanding achievement will require careful attention to course criteria and exceptional quality in course assignments. Course grades are computed according to the following weights assigned to each category of assignments:

First assignment	5%
Class participation	10%
Seminars (three)	45%
Information issues	15%
Exploratory investigation	30%

**Letter/Grade Point Equivalents; Grading Policy** /Final grades\* are based on the following range within the total 100 points possible:

<b>A (4.0)</b>	95 -100	<p><b>Superior attainment.</b> Assignments/exams must go beyond the minimum expected in terms of quality, including but not limited to aspects such as insight, creativity, analysis, thoroughness, accuracy, mechanics and synthesis. Work at this level demonstrates profound and progressive achievement in the expressed understanding of the principles and practices addressed in the assignment/exam. The work is clear, precise and extremely well-reasoned. Assumptions, inferences and intellectual processes are used effectively and creatively. The relevant is distinguished from the irrelevant, key concepts are clarified, opposing points of view are considered, and usage of language is astute. Sensitivity to important implications and consequences is present and expressed. Intellectual empathy and courage as well as fair-mindedness should also be evident.</p>
<b>A- (3.7)</b>	90-94	
<b>B+ (3.3)</b>	87-89	<p><b>Average attainment.</b> Assignments/exams fulfill the requirements and are generally error free in writing and formatting. The reasoning used in the assignment/exam is sound and consistently supported by evidence. Work at this level demonstrates achievement in the expressed understanding of the principles and practices addressed in the assignment/exam. The work is, on the whole, clear, precise, and well-reasoned, though with occasional lapses into weak reasoning. On average, assumptions, inferences and intellectual processes are used effectively. The work demonstrates a fairly consistent ability to distinguish the relevant from the irrelevant, clarification of key concepts, consideration of opposing points of view, and average use of language.</p>
<b>B (3.0)</b>	83-86	
<b>B- (2.7)</b>	80-82	
<b>C+ (2.3)</b>	77-79	<p><b>Below average attainment.</b> Assignments/exams may fulfill some of the requirements. Inconsistency or errors in writing and formatting may qualify for a grade in the C range. Inconsistent or weak reasoning, use of language, consideration of assumptions, inferences, and implications, and a lack of precision may also qualify work for a grade in the C range. The C-range work displays only occasional use of analysis and creativity.</p>
<b>C (2.0)</b>	73-76	
<b>C- (1.7)</b>	70-72	
<b>D+ (1.3)</b>	67-69	<p><b>Far below average attainment.</b> D-level work shows only a minimal level of understanding. D-range work shows only occasional critical thinking but frequent uncritical thinking. The assignments/exam are, for the most part, poorly done. There is little evidence of reasoning and/or the use of analysis or creativity. D-range work is lacks discipline and clarity, precision, and a lack of distinction between the relevant and the irrelevant. Opposing points of view may not be identified nor consequences or</p>
<b>D (1.0)</b>	60-66	

		implications.
<b>F (0)</b>	59 or lower	<b>Failure.</b> F-level work does not display critical thinking skills. The work is vague, unreasoned, and imprecise. There are many errors in writing, formatting, mechanics, language usage and/or reasoning. There is a lack of distinction between the relevant and the irrelevant. Opposing points of view are not identified nor consequences or implications.

\*Any core course with a final grade below B will need to be retaken

\*Students must maintain a cumulative GPA of 3.0 in LIS coursework

A final grade of "I" or "Incomplete" will **NOT** be given except in extreme situations. Please let me know if you're having difficulty completing the requirements of the course

A satisfactory quality of achievement with a grade point average of B (3.0) or better is required in graduate course work accepted for the degree. The average is determined on the basis of the University's grading system. Credits carrying below a "B-" will not be accepted by the LIS program as meeting degree requirements. A grade lower than "B" renders the credit unacceptable for meeting degree requirements.

**Assignments and Evaluation:**

Details of assignment description, due dates, grade weights for individual assignments are available via Blackboard on 'Assignments' page. Please see also the class schedule attached to this syllabus.

**Class Participation:**

This course equally relies on both synchronous and asynchronous mode of deliberations. Students are highly encouraged to actively participate in class deliberations and online via Blackboard. Active participation includes class discussions, asking and/or answering questions, challenging and debating on issues and topics raised in the content of the course.

## Class Schedule

Week	Topic/Readings	Assignment/Start Date	Due Date
1 1/5	<p><b>Fundamental concepts of information. What is Information science, Library Science, Documentation, &amp; Communication studies.</b></p> <p>Lester &amp; Koehler, Chapter 2, pp. 15-37; Raber, Chapter 1, pp.1-27; See BB for readings.</p>	<b>Icebreaker, first assignment – 1/5</b>	<b>1/11</b>
2 1/12	<p><b>Semiotics of Information Science.</b></p> <p>Raber, Chapter 11, pp. 225-254, see BB.</p>	<b>Seminar 1 – 1/12</b>	<b>1/25</b>
3 1/19	<p><b>Information Theory, Semantics.</b></p> <p>The math. theory of comm., pp. 21 – 56, see BB</p>		
4 1/26	<p><b>Bibliometrics, Citation analysis, Zipf, Lotka, Bradford, &amp; Webometrics.</b></p> <p>Raber, Chapter 4, pp.70-80; More readings in BB</p>	<p><b>Exploratory Investigation – 1/26</b></p> <p><b>Seminar 1 Discussion</b></p>	<b>3/9</b>
5 2/2	<p><b>Information representation and the concept of Aboutness.</b></p> <p>Raber, Chapters 7, pp. 131-155.</p>	<b>Seminar 2 – 2/2</b>	<b>2/15</b>
6 2/9	<p><b>Information Retrieval and the concept of Relevance.</b></p> <p>Modern Information Retrieval, Chapter 1, see BB.</p>	<b>Information Issues – 2/9</b>	<b>2/22</b>
7 2/16	<p><b>Database Systems &amp; data structures.</b></p> <p>See BB for readings.</p>	<p><b>Seminar 3 – 2/16</b></p> <p><b>Seminar 2 Discussion</b></p>	<b>3/1</b>
8 2/23	<p><b>Information Infrastructure, Information Grids.</b></p> <p>See BB for Readings.</p>	<b>Information Issues Discussion.</b>	
9 3/2	<p><b>Information visualization.</b></p> <p>Modern Information Retrieval, Chapter 10, see BB</p>	<b>Seminar 3 Discussion.</b>	
10 3/9	<p><b>Wrap-up. Presentation.</b></p>	<b>Exploratory Investigation Presentation</b>	<b>3/9</b>