Introduction
The representation and organization of information resources is a primary focus of the information profession. Organizational and representational structures such as classification schemes, indexes, and catalogs have been devised to provide access to information. The recent explosive growth in both the number and variety of information resources underscores the continuing need for application of effective methods of representation and organization.

Practical and effective information systems depend upon a comprehensive understanding not only of formal systems of organization and representation but also of human cognition itself. Accordingly, this course will investigate the basic principles and theoretical foundations of traditional representational and organizational schemes and review research in information science, cognitive science, semiotics, and computer science -- research that has contributed to an understanding of how people obtain, store, retrieve and use information. It will examine how this research can inform current practices of representation and organization in the design of more effective and more efficient information retrieval systems.

Course Objectives
By the end of the course, participants will

1. Be aware of a broad range of representational models drawn from the fields of communication, semiotics, philosophy, cognitive psychology, computer science and information science.

2. Understand the basic principles and functions of representational structures such as classification schemes, precoordinate and postcoordinate indexing systems, thesauri, metadata and ontologies.

Class Organization
Each class session will include lecture, discussion and/or in-class activities focusing on the topic and required readings identified in the syllabus. Students may be asked to work in small groups and to report on the results of small-group discussions. Students are encouraged to participate actively in all lectures and discussions since participation in class activities and discussions will constitute 10% of each student's final grade.

Readings
Required readings have been selected to encourage participation in class discussions and in-class group activities. The Schedule of Lectures and Required Readings lists session topics and required readings (pp. 5-8); the Schedule of Recommended Readings (pp. 9-15) lists additional readings for each session topic. All required and recommended readings are available on the Oncourse worksite for Z503. Assigned readings are subject to amendment by the instructor.
Grading
Each student's final course grade will be computed on the basis of grades earned for warm-up questions, midterm exam, final exam and class participation. Satisfactory fulfillment of the minimum course requirements as outlined in the syllabus is considered "Good work" and will constitute a grade of B (see "Grading Scale", pp. 4-5). Grades of A for work demonstrating "Outstanding achievement" or A- for "Excellent achievement" indicate "thorough knowledge of the course materials" and will be assigned only when the intellectual quality of a student's work surpasses expectations reflected in the minimum course requirements.

<table>
<thead>
<tr>
<th>Warm-up questions</th>
<th>30%</th>
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<tbody>
<tr>
<td>Midterm exam</td>
<td>30%</td>
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<tr>
<td>Final exam</td>
<td>30%</td>
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<tr>
<td>Class participation</td>
<td>10%</td>
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Warm-up Questions
Warm-up questions are intended to help students situate the conceptual content of readings in a broader context. Responses to warm-up questions will constitute 30% of the student's final course grade, and each response will be assigned a numerical grade on a scale of 0 to 3:

- 0 = no response
- 1 = Response indicates lack of full comprehension of issues.
- 2 = Response indicates full comprehension of issues but includes no original contribution(s).
- 3 = Response indicates full comprehension of issues and includes original contribution(s).

Warm-up questions will be posted as assignments on Oncourse on Mondays, one week before the response is due. Responses are to be submitted via Oncourse no later than 12:00 pm on the Monday before class. Late responses will be reviewed if they are submitted by 1:00 pm on the day of class; however, the grade for a late response will be docked one (1) point. Responses submitted after 1:00 pm on the day of class will not be graded.

There will be a total of ten (10) warm-up questions, each associated with the topic of the class session for which the warm-up question is posted. Warm-up questions will not be posted for Sessions 1, 9, 12 and 14.

Midterm and Final Exams
The midterm and final exams will each constitute 30% of the student's final course grade. Both exams will be take-home exams consisting of not more than six (6) questions. The midterm will be available on Oncourse by 9:00 am on 20 October 2013 and is to be submitted via Oncourse no later than 1:00 pm on 28 October 2013. The final exam will be available on Oncourse by 9:00 am on 2 December 2013 and is to be submitted via Oncourse no later than 5:00 pm on 12 December 2013.

<table>
<thead>
<tr>
<th>Due Date</th>
<th>Assignment</th>
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<tbody>
<tr>
<td>September 2</td>
<td>Session 2 Warmup</td>
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<tr>
<td>September 9</td>
<td>Session 3 Warmup</td>
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<tr>
<td>September 23</td>
<td>Session 4 Warmup</td>
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<td>September 30</td>
<td>Session 5 Warmup</td>
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<tr>
<td>October 7</td>
<td>Session 6 Warmup</td>
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<td>October 14</td>
<td>Session 7 Warmup</td>
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<td>October 21</td>
<td>Session 8 Warmup</td>
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<tr>
<td>October 28</td>
<td>MIDTERM EXAMINATION</td>
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<tr>
<td>November 4</td>
<td>Session 10 Warmup</td>
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<tr>
<td>November 11</td>
<td>Session 11 Warmup</td>
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<tr>
<td>December 2</td>
<td>Session 13 Warmup</td>
</tr>
<tr>
<td>December 12</td>
<td>FINAL EXAMINATION</td>
</tr>
</tbody>
</table>
Formatting Assignments

- All warm-up responses and exams are to be written in standard English (no abbreviations) and are to be spell-checked. All citations must be in APA 6th edition format.
- All warm-up responses and exams must be double-spaced and must have a header that includes your name, the assignment title, the date and consecutive page number(s).
- All assignments will be submitted in Word format (.doc or .docx). Warmups will have the filename [YourUsername]-[assignment][Session#].[extension] (e.g., garave-WarmUp10.docx); exams will have the filename [username]-[assignment].[extension] (e.g., guozhang-Midterm.docx).

Class Participation

Assigned readings, class discussions and small group activities are intended to create a learning community and to promote critical literacy skills among all students -- skills of reading, writing, listening, speaking and thinking. It is important for all students to actively participate in class discussions and in-class activities since the success of these activities requires substantive and meaningful contributions from all students. Class participation will constitute 10% of the student's final grade and will reflect a student's participation in discussions and activities based on the following criteria:

- attendance;
- regular and voluntary contributions to class discussions;
- ability to tie observations to the ideas developed in the readings, to the contributions of other discussants and/or to ideas presented in other classes;
- contribution of observations or ideas that are original or diverge from commonly accepted notions;
- continuous demonstration of respect for the ideas, opinions and feelings of all members of the class.

Late Submissions

Responses to warm-up questions must be submitted by 12:00 pm on the Monday before the class session for which they have been assigned. Late submissions will be graded as described (see Warm-up Questions, above) if they are submitted by 1:00 pm on the day of class. Submissions submitted after 1:00 pm on the day of class will not be accepted.

In fairness to students who turn in assignments on time, late papers other than warm-up questions will be penalized by lowering the earned grade one level for each day that the paper is late. For example, a final exam with an earned grade of A- will receive a grade of B+ if it is one day late, a grade of B if it is two days late, etc. The first day starts one second after the assignment is due, and lasts 24 hours, 24 hours and one second marks the start of day 2, etc.

Incompletes

Each student is expected to complete all coursework by the end of the term. A grade of incomplete [I] will be assigned only when exceptional circumstances warrant.

Academic Dishonesty

As Dr. Alice Robbin observes in her Fall 2008 syllabus for S506, there is more to avoiding plagiarism than simply citing a reference. Dr. Robbin points out that, in order to aid students both in recognizing plagiarism and in avoiding the appearance of plagiarism, Indiana University's Writing Tutorial Services has prepared a short guide entitled "Plagiarism: what it is and how to recognize and avoid it". This guide is available at: http://www.indiana.edu/~wts/wts/plagiarism.html. The guide provides explicit examples of plagiarism and offers strategies for avoiding it. Each student should be familiar with this document and use it as a guide when completing assignments.
Dr. Robbin offers three "rules" for avoiding inadvertent plagiarism -- rules that she gleaned from Ralph Brower, a colleague at Florida State University:

1. Whenever you "borrow" material, from any resource whatsoever, for inclusion in a document you are writing, you must provide a footnote, endnote or parenthetical reference (with accompanying bibliographic citation) identifying the original resource. If you have any questions about how to do this, review the guidelines set out in the 5th edition of the APA Style Manual.

2. Any time that you quote any resource verbatim, you must enclose the text in quotation marks and identify the original resource, as indicated in (1).

3. Text that you paraphrase and ideas that you "borrow" must also be attributed, as indicated in (1), even if you do not quote the original source verbatim.

Policies on academic dishonesty have been established by Indiana University and the Department of Information and Library Science. These policies, which have been set out in the Code of Student Ethics, will be adhered to in this class. Any assignment that contains plagiarized material or indicates any other form of academic dishonesty will receive, at a minimum, a grade of F. A second instance will result in an automatic grade of F or the course. Penalties may be harsher depending on the severity of the offense.

Notice
If you are a student with a special need, please feel free to discuss it with the instructor.

Office Hours
Office hours are by appointment via email. Don't hesitate to contact the instructor if you have questions, problems or comments. Please use: garave@indiana.edu – DO NOT email me through Oncourse!

Grading Scale
All grades will be assigned according to the ILS Grading Policy for Master's and Specialist Level Students. This policy was defined by student and faculty members of SLIS's Curriculum Steering Committee and was adopted by the Faculty of the School of Library and Information Science, Indiana University, on November 11, 1996, as an aid in evaluation of student performance:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Numerical Equivalent</th>
<th>Definition</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>4.0</td>
<td>Outstanding achievement. Student performance demonstrates full command of the course materials and evinces a high level of originality and/or creativity that far surpasses course expectations.</td>
</tr>
<tr>
<td>A-</td>
<td>3.7</td>
<td>Excellent achievement. Student performance demonstrates thorough knowledge of the course materials and exceeds course expectations by completing all requirements in a superior manner.</td>
</tr>
<tr>
<td>B+</td>
<td>3.3</td>
<td>Very good work. Student performance demonstrate above-average comprehension of the course materials and exceeds course expectations on all tasks as defined in the course syllabus.</td>
</tr>
<tr>
<td>B</td>
<td>3.0</td>
<td>Good work. Student performance meets designated course expectations, demonstrates understanding of the course materials and performs at an acceptable level.</td>
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</tbody>
</table>
Grading Scale, continued

- **B-** 2.7 Marginal work. Student performance demonstrates incomplete understanding of course materials.
- **C+** 2.3 Unsatisfactory work. Student performance demonstrates incomplete and inadequate understanding of course materials.
- **C** 2.0
- **C-** 1.7 Unacceptable work. Coursework performed at this level will not count toward the MLS or MIS degree. For the course to count toward the degree, the student must repeat the course with a passing grade.
- **D+** 1.3
- **D** 1.0
- **D-** 0.7
- **F** 0.0 Failing. Student may continue in program only with permission of the Dean.

Schedule of Lectures and Required Readings

NOTE: For each class session, the following schedule includes a topic statement and a list of required readings. **Required readings are listed in the order in which they should be read.**

- **Session 1 -- August 27** → Topic: Introduction to representation and organization.
- **Session 2 -- September 3** → Topic: Representation.

**Required readings for Session 2:**


- **Session 3 -- September 10** → Topic: Data, information, knowledge.

**Required readings for Session 3:**


### Session 4 -- September 24

**Topic: Cognitive Representation:** Augmentation & Mental Models.

**Required readings for Session 4:**


### Session 5 -- October 1

**Topic: Cognitive Representation: Part III. Categorization.**

**Required readings for Session 5:**


### Session 6 -- October 8

**Topic: Systematic Representation: Abstracting & Indexing**

**Required readings for Session 6:**


Session 7 -- October 15 → Topic: Systematic Representation: Precoordinate/ Postcoordinate Indexing.

Required readings for Session 7:

Session 8 -- October 22 → Topic: Systematic Representation: Classification.

Required readings for Session 8:

Session 9 -- October 29 → Topic: Systematic Representation: Enumerative Classification.

Required readings for Session 9:

Session 10 -- November 5 → Topic: Systematic Representation: Faceted Classification.

Required readings for Session 10:
Session 11 -- November 12  → Topic: Social Tagging and Folksonomies.

**Required readings for Session 11:**


Session 12 -- November 19  → Topic: Metadata for the semantic web

**Required readings for Session 12:**


Session 13 -- December 3  → Topic: Ontologies.

**Required readings for Session 13:**


**Required readings for Session 14:**


Schedule of Recommended Readings

Recommended readings are organized by session and topic according to the Schedule of Lectures and Readings. Within each topic, recommended readings are ordered alphabetically and may be read in any order at any point across the semester.

Session 1 -- Introduction


Session 3 -- Data, information, knowledge


Session 4 -- Cognitive Representation: Part I. Augmentation


Session 4 -- Cognitive Representation: Part II. Mental models.


Session 5 -- Cognitive Representation: Part III. Categorization


Session 6 -- Systematic Representation: Part I. Abstracting


Session 6 -- Systematic Representation: Part II. Indexing Languages


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**Session 7 -- Systematic Representation: Part III. Precoordinate and Postcoordinate Indexing**


**Session 8 -- Systematic Organization: Classification**


**Session 9 -- Systematic Organization: Part V. Enumerative Classification**


Session 10 -- Systematic Organization: Faceted Classification


Session 11 -- Tagging and Folksonomies


Session 12 – Metadata and the Semantic Web


Session 13 -- Ontologies


Session 14 -- Nontextual Materials


