IRLS 515-010 Organization of Information (Virtual Cui)

Updated Mon, 08/24/2009 - 19:00

COURSE NAME, NUMBER AND PREREQUISITES:

IRLS 515-010 Organization of Information

[Prerequisite: IRLS 504 or consent of the instructor.]

Instructor: Hong Cui

A few words from the Instructor:

The learning curve at the beginning of 515 (Hong's version) is rather steep for most students, especially when you take it online. In the past, after taking the course, at least five out of thirty students would NOT recommend to take the course online. Please take this into consideration when you register. Be prepared to do a lot of readings and repeat them a few times. Class discussions are very helpful and you need to be actively involved in the discussion. No assignment or quiz is due in week 1-4 because you truly need the time to digest many new concepts.

I think a fair statement about this 515 class is that "you will have a lot of fun and learn many new things, but it does require a strong motivation and a lot of effort".

If you do decide to take on the challenge the first term you are in the program, please note that the Instructor and the TA are committed to help you whenever you need a hand.

What follows is the syllabus from Spring 09. We are implementing a virtual lab for Fall 09 so there WILL be some changes on technology requirement (we may remove the technology requirement) and how the discussion forums will be handled. Come back 2 weeks before the course starts for the updated syllabus.

[Update Aug 10, 09] The virtual lab is being implemented and turns out to be pretty easy to use. Students owning a computer (as long as it is not ancient) should not worry about purchasing MS Access or installed any other software. The virtual lab should provide appropriate environment for your assignments. MAC users will need do a bit more to set up the virtual lab right. Do not worry. The implementation team will provide training on how to set up and use the virtual lab.

[Outdated] Technology Requirement: Students registered in this virtual offering of 515 have access to a PC that has MS Access 2003 or 2007 installed and that the student can also install a free software TermTree. TermTree (installs on PCs only) and MS Access are necessary for students to complete two of the assignments. [Outdated]

COURSE DESCRIPTION:
Official Course Description

Introduction to the theories and practices used in the organization of information. Overview of national and international standards and practices for access to information in collections.

Specific Course Description

We will study the history, theories, and practices in the organization of recorded information, print and digital. An introductory course, IRLS 515 will survey the information and knowledge organization techniques that exist or are emerging, such as controlled vocabularies and the Semantic Web. We will focus on standards and tools that are used in large text-based information environments. We will approach these fascinating topics through intellectual discussions and hands-on exercises. We will be using the D2L (Desire to Learn) learning support system. All course related materials can be found there. Log on D2L at http://d2l.arizona.edu using your UA username and password. That website also contains d2l tutorials you may consult. Further D2L help can be found at D2L@email.arizona.edu or (520) 626-6804.

When should you take IRLS 515?

IRLS 515 Organization of Information is a required core course. This course surveys main theories and techniques currently in use (or have a potential for the future) for organizing data, information, and knowledge. The course is a mixture of lecture, discussion, and hands-on exercises involving a number of different computer software. This course is the prerequisite for IRLS 530 Cataloging and Metadata Management, IRLS531 Indexing and Abstracting, and IRLS 630 Controlled Vocabularies. It is also a helpful intro to IRLS570/588 Database Development and Management. The professor of record for this course is Dr. Hong Cui.

Student feedback so far suggests that IRLS 515 is not easy but certainly manageable. A lot of concepts and most software introduced in 515 are new to most students, even to those with library experience. These and the readings can be overwhelming. At the same time, some students felt that they learned a lot from 515 and some of them felt they should have taken 515 before they took some other courses not listing 515 as a prerequisite. Some students regretted that they took 515 too late to take subsequent courses.

Based on student feedback, Hong advises students to consider taking IRLS 515 early (in their first term) if they are interested in any subsequent courses in the knowledge organization thread. Students are at the same time advised not to take more than two core courses per term. Students interested in academic libraries and special libraries are especially encouraged to take 515 early.

While students evaluation of the face2face and online delivery of the course has been roughly the same, more students would recommend taking Hong's 515 in a face2face mode, which Hong agrees.

COURSE OBJECTIVES:

The main goal of the course is to help students become familiar with the concepts and practices of bibliographic and non-bibliographic information organization and to nurture students’ interests in exploring this field further after completing the course. By the end of the course, the student will be able to:

· Understand the existing and new challenges involved in organization of information.

· Define a number of approaches that have been used to organize information in different settings and for different purposes.

· Compare and contrast the range of information organization approaches.

· Describe the main theories of information organization in library settings.

· Demonstrate basic skills in controlled vocabulary creation.

· Demonstrate basic knowledge of at least two metadata standards.
· Demonstrate basic skills in database construction.

· Articulate the similarities and differences between foundational concepts such as a thesaurus, ontology, authority file, subject heading list, and library classification scheme

REQUIRED COURSE MATERIALS:


· Other course readings are online. Students will be able to access them without charge. [We will use these readings mostly in the second half of the term. Readings marked as “for interested readers” are not required.]

· It is absolutely necessary for students to complete all required readings and note their questions before coming to the class.

COURSE REQUIREMENTS:

In addition to weekly discussions (two topics a week), students will complete three assignments and four quizzes. Discussions will be done in groups of about 10 students. Each week each group will produce a summary on their discussions for the whole class to comment on.

Quizzes must be taken individually on D2L. Quizzes are available for three days. Students are allowed for three attempts (we record the highest mark). No make-up quiz will be given.

Based on feedback from face2face and online students, in Spring 2009, I am going to try for the first time to make assignments group work for online students. To make it easier to manage, each group should ideally have two members, no more than three members are allowed in a group. In special cases, students may also work individually [but be aware most students find 515 assignments are totally "new" to them, working in a group help them understand the material better and produce better work].

Quizzes (5% each, total 20%):

1. Encoding Standards and Metadata
2. Controlled Vocabulary and Subject Analysis
3. Database
4. Web Information Organization and Knowledge Management

Assignments: (15% each, total 45%)

1. Metadata Schema and Revision
2. Controlled Vocabulary Construction
3. Database Theory and Construction
Participation (35%)

1. Substantial contributions to weekly discussion.
2. Produce at least 1 weekly summary.
3. Other activities that contribute to a positive learning experience for class members.

COURSE, SCHOOL, AND UNIVERSITY POLICIES:

Academic Code of Integrity

Students are expected to abide by The University of Arizona Code of Academic Integrity. ‘The guiding principle of academic integrity is that a student's submitted work must be the student's own.’ If you have any questions regarding what is acceptable practice under this Code, please ask an Instructor.

Accommodating Disabilities

The University has a Disability Resource Center. If you anticipate the need for reasonable accommodations to meet the requirements of this course, you must register with the Disability Resource Center and request that the DRC send me, the Instructor, official notification of your accommodation needs as soon as possible. Please plan to meet with me by appointment or during office hours to discuss accommodations and how my course requirements and activities may impact your ability to fully participate.

Assignment Policies

Assignment Policies

· All work must be turned in on the dates due by midnight (12:00pm) Arizona time. Late work without prior notice to and approval from the Instructor will receive 5% deduction for each late day. For example, if your work is marked at 80% but you hand it in 1 min after the midnight, your mark for that assignment will be 80%*0.95=76%. Assignments late for 5 days will not be marked unless an extension is granted by the Instructor.

· In case of D2L malfunctions, email your assignment to hong1.cui@gmail.com (so your assignment will not be marked as late) and then resubmit your assignment to D2L dropbox (or “late” dropbox). Only assignments in D2L dropbox will be graded. Email submissions only establish a timestamp on an assignment.

· Be sure to check your submissions are successful. “I am not sure what had happened, but I honestly thought I had submitted my assignment on time” is not an acceptable excuse for waiving the late penalties.

· HTML format must be used for all written assignments turned in for grading. Assignments in any other format are discarded without grading. Feel free to use any editor to produce the HTML documents.

· Missing one assignment will result in a C, so please DO stick to these guidelines. You’ve been warned.

· An assignment is due on the same date the next assignment is assigned. See the schedule for the starting dates.

· All work may be checked by Turnitin.com or other tools made available to the Instructor.

Incompletes
The current Catalog reads

The grade of I may be awarded only at the end of a term, when all but a minor portion of the course work has been satisfactorily completed. The grade of I is not to be awarded in place of a failing grade or when the student is expected to repeat the course; in such a case, a grade other than I must be assigned. Students should make arrangements with the instructor to receive an incomplete grade before the end of the term ...

If the incomplete is not removed by the instructor within one year the I grade will revert to a failing grade.

GRADING:

Course grades will be assigned as follows:
A=90+ (Superior Work)
B=80-89 (Very Good)
C=70-79 (Marginally Satisfactory)
F=0-69 (Failed to meet requirements)

INSTRUCTOR NAME AND CONTACT ADDRESSES:

Dr. Hong Cui
hongcui@email.arizona.edu

IRLS 515 Additional Information Before the Term Starts:

The following information is provided to assist students solely to schedule their time for the term. Everything is subject to change.

Course Schedule (subject to change, depending on the progress we make in the virtual classroom)

Be sure to read carefully the documents in the "Course Overview" section in the first week.
<table>
<thead>
<tr>
<th></th>
<th>Describing Information Packages II</th>
<th>Taylor ch 4, 7</th>
<th>Encoding/Metadata Quiz</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Controlled Vocabulary I</td>
<td>Taylor ch 8, 9, 10</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Controlled Vocabulary II</td>
<td>Taylor ch 8, 9, 10</td>
<td>Controlled Vocabulary Assignment</td>
</tr>
<tr>
<td>8</td>
<td>Classification</td>
<td>Taylor ch 9, 11, Appendix A</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Database I</td>
<td>Online</td>
<td>CV/Classification Quiz</td>
</tr>
<tr>
<td>10</td>
<td>Database II</td>
<td>Online</td>
<td>Database Assignment</td>
</tr>
<tr>
<td>11</td>
<td>Database III</td>
<td>Online</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Information Retrieval</td>
<td>Online, Taylor ch 6</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Organizing Web Information</td>
<td>Online</td>
<td>Database/IR Quiz</td>
</tr>
<tr>
<td>14</td>
<td>Semantic Web and Ontology</td>
<td>Online</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Knowledge Management</td>
<td>Online</td>
<td>Web/KM Quiz</td>
</tr>
</tbody>
</table>

Software needed for the assignments:


2) Microsoft Access

Besides those, you may want to learn to use Jing [http://www.jingproject.com/](http://www.jingproject.com/) (all videos below were made using Jing).

List of videos showing how TermTree and Access work:

- Learn to Use Term Tree
  - [http://screencast.com/t/WDkBpcSfB6](http://screencast.com/t/WDkBpcSfB6) (TermTree1)
  - [http://screencast.com/t/inMnETMqcy6](http://screencast.com/t/inMnETMqcy6) (TermTree2)
  - [http://screencast.com/t/t0IgZyTZ](http://screencast.com/t/t0IgZyTZ) (TermTree3)
Complete list of database demos using MS Access 2007

One Table Database: Book

Design book table: http://screencast.com/t/iNCfjUdd
Implement the book table: http://screencast.com/t/ZOuEA3gp
Enter data into the book table: http://screencast.com/t/gwAEMZcBQ4B
Create data entry form for the book table: http://screencast.com/t/1ltUrLlwz
Add background color and logo to the entry form: http://screencast.com/t/EQMfsLbrMRh
Create a simple query to find all books that are on loan: http://screencast.com/t/musGoMXbn5s
Create a Boolean query and a Parameter query: http://screencast.com/t/iN5ALZd2Qy
Create a query that uses wildcards: http://screencast.com/t/oaedESZ9
Create book inventory report: http://screencast.com/t/Uhc19TzrMx
Create onloan book report: http://screencast.com/t/CVnF7BaGHu3

1:N Relationship: patron borrows book

Implement the 1:N relationship: http://screencast.com/t/ylriNiYw
Enter data into patron and book tables: http://screencast.com/t/66NV5gs8NA7

M:N Relationship: book has author

Design the M:N relationship: http://screencast.com/t/oPpc00wEvIA
Implement the M:N relationship: create three tables: http://screencast.com/t/pXHQhKOHMG
Implement the M:N relationship: establish relationships: http://screencast.com/t/Ku2GEcepv
Create data entry forms for the database: http://screencast.com/t/PG6Py2kM
Use the data entry forms to enter data into the database: http://screencast.com/t/61ABdmEa
Create a query over the relationship: http://screencast.com/t/fVkD1kEBTH

Reading List

The "Must Read" for the first half of the term:

Taylor, Arlene & al.. (2008). The Organization of Information. 3rd Ed. Englewood, CO: Libraries Unlimited. The Organization of Information (Library and Information Science Text...
Information Organization Overview:


Encoding Standards:

- *XML tutorial* [http://w3schools.com/xml/default.asp](http://w3schools.com/xml/default.asp) [short articles, interactive examples, easy to follow]

Describing Information Packages (i.e. Metadata):

Basics:


- *Gilliland, Anne J. Setting the Stage, Introduction to Metadata, Pathways to Digital Information, Online ed. v. 2.1. Available at: [http://www.getty.edu/research/conducting_research/standards/intrometadata/setting.html](http://www.getty.edu/research/conducting_research/standards/intrometadata/setting.html) [covers different aspects of metadata]


- The Warwick Framework: [http://www.dlib.org/dlib/july96/lagoze/07lagoze.html](http://www.dlib.org/dlib/july96/lagoze/07lagoze.html)

Metadata Schemas(exercises):


- *DC.Coverage:* [http://alexandria.sdc.ucsb.edu/public-documents/metadata/dc_coverage.html](http://alexandria.sdc.ucsb.edu/public-documents/metadata/dc_coverage.html) [a snapshot on how the DC.Coverage element was defined in 1997]

- *DCMI Metadata Terms:* [http://www.dublincore.org/documents/dcmi-terms/](http://www.dublincore.org/documents/dcmi-terms/) [the official site of DC metadata terms, always come to this site for the most recent update]


- *Look over the VRA Core (Visual Resources Association Core) examples of HTML and XML metadata. Available at: [http://gort.ucsd.edu/escowles/vracore4/](http://gort.ucsd.edu/escowles/vracore4/)

Longer and More Advanced:


**Controlled Vocabularies:**

- *Craven, Tim, Thesaurus Construction tutorial. [http://publish.uwo.ca/~craven/677/thesaur/main00.htm](http://publish.uwo.ca/~craven/677/thesaur/main00.htm) [explains different types of relationships among thesaurus terms] This could be a great help for your controlled vocabulary assignment. There are also quiz questions to test your understanding. Do note though, a few guidelines Craven offered do not entirely agree with the ANSI/NISO standard Z39.19 But those are not critical.

- Read "Learn about the Getty Vocabularies, available at: [http://www.getty.edu/research/conducting_research/vocabularies/](http://www.getty.edu/research/conducting_research/vocabularies/) and read about the Art & Architecture Thesaurus (ATT), section Preface-1.1.3.4, available at: [http://www.getty.edu/research/conducting_research/vocabularies/guidelines/aat_1_contents_intro.html](http://www.getty.edu/research/conducting_research/vocabularies/guidelines/aat_1_contents_intro.html) View a sample record at: [http://www.getty.edu/research/conducting_research/vocabularies/guidelines/aat_2_general_guidelines.html#2_4](http://www.getty.edu/research/conducting_research/vocabularies/guidelines/aat_2_general_guidelines.html#2_4)

- Weinberger, David. Everything Is Miscellaneous: The Power of the New Digital Disorder [PDF on D2L.](http://www.d2l.org) [An opposite view point: let’s get rid of control!]

**Classification:**


- "The Dewey Decimal Classification, A Multimedia Tour," available at [http://www.oclc.org/dewey/resources/tour](http://www.oclc.org/dewey/resources/tour) [shows the essentials of DDC]

Required readings for the second half of the term

**Relational Database:**


**Information Retrieval**

- Information retrieval education resources. [http://ir.exp.sis.pitt.edu/res2/resources.php](http://ir.exp.sis.pitt.edu/res2/resources.php) [There are e-books, a glossary, and a lot of demos. Some links are not active any more.] This site include a wealth of topics/demos related to IR, feel free to read/play around. At the bottom of the page, there are two online text: one is [Van Rijsvergen's Information Retrieval](http://vanrijsvergen.com/IR/IR.html), a classic text. Read at least ch 1 and 2; the other is a newer text: R. W. Belew Finding out about: A Cognitive Perspective on Search Engine Technology and the WWW (first click on [Hyper Text Book Web from University of Padova](http://www.sci.unipd.it/acs/htbw/), the 2nd link there is R.W.Belev). Read ch 1 (page 1-39). Pages are very short. Tables/figures are missing.
Organizing Web Information

- Fan, W. et al. (2006). Tapping the power of text mining. Communications of the ACM. 49(9) 76-82. Available in PDF on D2L.

Semantic Web and Ontology

- Introduction to OWL. http://www.w3schools.com/rdf/rdf_owl.asp [try it. It is good.]

- Barry Smith's training course on biomedical ontology: Read preliminary readings found at http://www.bioontology.org/wiki/index.php/Introduction_to_Biomedical_Ontologies

Knowledge Management and Information Visualization:

- *Ben Shneiderman: The Thrill of Discovery - Accelerating Information Exploration [online video]: http://spotfire.tibco.com/events/webcasts/detail.cfm?id=6294. [create a free profile or use "heui7@uwo.ca" and "course" to login]
- http://www.smartmoney.com/marketmap/
- visual thesaurus: http://www.visualthesaurus.com/ 
Navigation

- Browse Site
- For Authors

Courses

- Syllabi
  - Fall 11
    - Summer 2011
    - Spring 11
    - Fall 10
    - Summer 10
    - Winter 10-11
    - Spring 10
    - Winter 09 10
  - Fall 09
    - IRLS506-001 Research Methods (On Campus Higgins)
    - IRLS506-010 Research Methods (Virtual Atkinson)
    - IRLS506-011 Research Methods (Virtual Seavey)
    - IRLS515-001 Organization of Information (On Campus Frické)
    - IRLS515-010 Organization of Information (Virtual Cui)
    - IRLS515-011 Organization of Information (Virtual Frické)
    - IRLS520-001 Ethics for Library and Information Professionals (On Campus Mathiesen)
    - IRLS520-010 Ethics for Library and Information Professionals (Virtual Fallis)
    - IRLS524 Information Resources and Services
    - IRLS532-001 Online Searching
    - IRLS553 Issues in Culture & Information Technology
    - IRLS561 Academic Libraries Practice and Administration
    - IRLS570 Database Development and Management
    - IRLS571-010 Introduction to Information Technology
    - IRLS571-011 Introduction to Information Technology (Smith)
    - IRLS572-010 Government Information
    - IRLS574 Digital Libraries
    - IRLS575 User Interface and Web Site Design
    - IRLS588-011 History of the Book
    - IRLS608 Planning and Evaluation of Libraries and Information Centers
    - IRLS617-010 Social Epistemology and Information Science
    - IRLS671 Introduction to Digital Collections
    - IRLS675 Advanced Digital Collections
    - IRLS696E Human Rights to Information
  - Summer 09
  - Spring 09
  - Winter 08 09
  - Fall 08
  - Archive of Old Syllabi

- Schedules
Guided exploration

Click a term to initiate a search.

Audience
- for Students (92)
- for Faculty (28)
- for Alums (24)
- for Staff (17)
- for Prospective Students (7)
  more...

Course
- IRLS417 (2)
- IRLS418 (1)
- IRLS432 (1)
- IRLS470 (2)
- IRLS488 (6)
  more...

People
- Adjunct Faculty (152)
- Faculty (150)
- Staff (17)
- Friends (6)

Semester
- Fall 11 (29)
- Summer 11 (27)
- Spring 11 (30)
- Winter 10 11 (1)
- Fall 10 (20)
  more...

Task
- Choosing Courses (27)
- Advising (5)
- Applying (5)
- Registering (2)
- Submitting Final Paperwork (2)
  more...

Topic