Representing and Organizing Information Resources  
(LIS590)

Section RO   Mondays 9:00–11:50am   LIS Building, Room 341

This document is Copyright © 2013 by David Dubin and the Trustees of the University of Illinois. In addition to this syllabus, this course is governed by the rules and guidelines set forth in the Code of Policies and Regulations Applying to All Students and A Handbook for Graduate Students and Advisers which graduate students receive upon admission to the program. Students should also consult, and take to heart, the Professional Guidelines and Codes of Ethics for Library and Information Science Professionals available from the GSLIS main office.

This syllabus is provided to UIUC students as part of the materials for a particular class. However, it may be copied, redistributed, and modified under the terms of the Creative Commons Attribution-ShareAlike license (Version 2.0). The text of that license is available on the Worldwide Web at creativecommons.org. Resources that are linked to or referenced from within this syllabus (e.g., readings, outlines, discussions) are not covered by the license, unless specifically labeled as such.

INSTRUCTOR

David Dubin
Office: LIS 330
Office Hours: Thursdays 2:00–5:00pm, and by appointment (face to face is your instructor’s preferred contact method).
Phone: 217–244–3275 (217–BIG–EARL) skype:ddubin65
Email: ddubin
Web: http://people.lis.illinois.edu/~ddubin/

REQUIRED TEXTS

Reading assignments are listed below on the course calendar and bibliography. There is no textbook to purchase for this class.

LIBRARY RESOURCES

Library resources and information are available at the following online addresses:

- University of Illinois Library: http://www.library.illinois.edu/
- Library and Information Science Virtual Library: http://www.library.illinois.edu/lsx/
- Journal and Article Locator: http://search.grainger.uiuc.edu/linker/
- LIS Librarian (email: lislib@library.illinois.edu, phone: 217-333-3804)
**COURSE DESCRIPTION**

Emphasizes concepts and methods of organizing information resources across different settings and systems, or within one particular setting. The course extends the basic conceptual foundation provided in LIS 501 by providing further reading, analysis, discussion, and practice related to one or several major traditions of information organization in different environments (e.g., libraries, museums, archives, Internet, and within a single organization).

*Pre- and Co-requisites*

Students are strongly urged to complete LIS501 before enrolling in this course.

**COURSE OVERVIEW AND WELCOME**

I am very happy to welcome you to LIS590-RO, and to express my strong desire to make this a useful and productive course for you. Many of you are enrolling soon after completing the required core class on information organization and access. Despite the generality of my course’s title and description, you have chosen to join RO rather than one of its more specialized IO/KR siblings. Job ads in our professions read like laundry lists of specialized skills, even at the best of times. Even more so in times of economic stress, I think your choice of a principles class shows courage and a recognition of the importance of taking the long view of your professional career. I congratulate you, and promise that I will work hard to justify your faith.

Descriptive standards and practices are undergoing reforms, both for familiar library resources and other types not traditionally associated with our stewardship. We see new cataloging principles being proposed, and harsh criticisms leveled against metadata standards widely viewed as new and promising only a short time ago. Responding, adapting, and even helping to frame these kinds of reforms will be a part of your working life for the rest of your career. Rather than delving into the particulars of the current debates, this course aims to equip you to form your own views in debates current and future. This will be accomplished through the construction of a conceptual framework into which problems of resource description and organization can be situated and understood. Along the way, you will work on hands-on exercises that connect these concepts to practical problems. But you should view these exercises not as skills to be developed, but as vehicles for improving your understanding of principles and concepts.

**LEARNING OBJECTIVES**

Your instructor hopes to learn more about your objectives for this course. His own objectives include the following:

- Disentangle levels of abstraction that are commonly blurred and confounded in the professional literature and discussion of resource organization and description.
- Build a conceptual framework that will help equip students for more specialized IO/KR classes, and prepare them for inevitable future changes to descriptive standards and practices.
- Confront the complexities arising from our colleagues’ conflicting philosophical commitments, and understand the very practical implications these basic world views have on our professional lives.
- Engage in resource description exercises that will help make the concepts we read about and discuss more concrete, and provoke us to think about them more deeply.

**THIS SYLLABUS**

The official syllabus for this course is the SGML version that is linked off the class web page. Expressions of the syllabus in other formats are derived from the SGML version. The current SGML version should be consulted to resolve any inconsistencies among other renditions.
STATEMENT OF INCLUSION

The following expression is adopted from the Chancellor’s Commitment Statement of November 2012:

As the state’s premier public university, the University of Illinois at Urbana-Champaign’s core mission is to serve the interests of the diverse people of the state of Illinois and beyond. The institution thus values inclusion and a pluralistic learning and research environment, one which we respect the varied perspectives and lived experiences of a diverse community and global workforce. We support diversity of world views, histories, and cultural knowledge across a range of social groups including race, ethnicity, gender identity, sexual orientation, abilities, economic class, religion, and their intersections.

DISABILITY STATEMENT

To obtain disability-related academic adjustments and/or auxiliary aids, students with disabilities must contact the course instructor and the Disability Resources and Educational Services (DRES) as soon as possible. To contact DRES you may visit 1207 S. Oak St., Champaign, call 217-333-4603 (V/TTY), or e-mail a message to disability@uiuc.edu.

BASIS FOR GRADING AND EVALUATION

The most important standards for success in a class like this one are the educational goals that students bring to the class. Your instructor hopes that the activities, assignments, and presentations planned for this semester will be instrumental in your achieving the goals you set for yourself. Each exercise and assignment has been selected to provide an experience that will foster your own learning. Do not think that grading and evaluative feedback are meant as assessments of your success or failure in the class: they are provided as an incentive to engage with the material to the best of your ability, and as a diagnostic to ensure you’re getting the benefits that the assignments should provide.

For students enrolled for four units, final grades will be calculated as follows:

- Graded homework assignments 40%
- Term Project: 30%
- Class Participation: 30%

For students enrolled for two units, final grades will be calculated as follows:

- Graded homework assignments 55%
- Class Participation: 45%

Evaluative and constructive feedback

Students are entitled to both evaluative and constructive feedback on the assignments. Evaluative feedback reports how well a completed assignment satisfied the requirements for a grade. Constructive feedback provides more detailed criticism of the work, and suggestions for improvement.

On Adapting the Work of Others

Criteria for grading homework assignments include (but are not limited to) creativity and the amount of original work demonstrated in the assignment. However, students are permitted to use and adapt the work of others, provided that the following guidelines are followed:

- Use of other people’s material must not infringe the copyright of the original author, nor violate the terms of any licensing agreement. Know and respect the principles of fair use with respect to copyrighted material.
Students must scrupulously attribute the original source and author of whatever material has been adapted for the assignment. Summarize the changes or adaptations that have been made. Make plain how much of the assignment represents original work.

**Submitting Assignments to the Instructor**

All assignments must be submitted in machine readable form. The instructor will discuss detailed requirements for file naming, packaging, and submission for each assignment.

**Graded Assignments**

There will be seven graded homework assignments. Each one requires a short essay one to five pages in length, with most of the content in expressed in natural language, and some in a formal language or standardized notation. The assignments are:

- Resource domain/genre description (due January 28)
- Ten resources for description (due February 11)
- Five resource properties (due February 25)
- Entity identification and property domains (due March 11)
- Property codomains and coded symbols (due April 1)
- Preliminary resource description: property values (due April 15)
- Description record syntax (due April 29)

**Assignment 1: resource domain/genre description**

This assignment is due January 28.

In the next assignment, you will select ten (cultural or natural) resources of your choice for analysis and description. Before doing so, give some critical thought to the domain and/or genre from which you will select them. Write a 1–3 page justification, focusing on the characteristics of the domain or genre that you believe will make our later exercises instructive for you. These characteristics might include:

- Your personal familiarity with and interest in the domain/genre.
- Reasons people other than you have in locating and using resources of this kind. Competing or conflicting interests are often a good sign.
- Problems with or limitations of current approaches to describing or classifying these kinds of resource.
- Complexity of the resource (n.b., familiar resources are often more complex than meets the eye).

Please note that a domain or genre is not a topic. If you select President Abraham Lincoln (1809–1865) as the domain for this assignment, then for the next assignment you’ll need to identify ten different deceased U.S. presidents, each of whom was named Abraham Lincoln, and each of whom lived from 1809 to 1865. Examples of more promising domains include:

- Journal articles in zoology
- Your grandmother’s postcard collection
- Eighth century Byzantine coins
- Prime numbers
- Board games
- Ethnographic data
- Young adult novels
- Mollusc shells
The aim of this assignment is to help you relate the topics in our readings and discussions to concrete examples that you can explore in the homework assignments.

Assignment 2: ten resources for description

This assignment is due February 11.
Select ten cultural or natural resources, all drawn from the same domain, type, or genre. In later assignments, you will analyze them with respect to their properties, the relations they stand in with respect to each other, and their identity conditions. For this assignment, write a brief, one paragraph natural language description of each one. If your choice of domain/genre in the last assignment was a mistake, include a discussion of the new domain or genre. Let your choice of the ten be guided by those characteristics you considered in assignment 1. In the interests of making your later assignments more instructive, choose resources that collectively exhibit diversity, highlight complexities, and push against the limitations and problems of current descriptive practice.

The aim of this assignment is to choose a small number of specific resources that can serve as the focus for your thinking about and applying the description and organization issues we discuss this semester.

Assignment 3: Five resource properties

This assignment is due February 25.
Choose five properties or relations that will serve as a basis for the organization and description of your ten resources. Most or all of your resources should have some value on that property (or stand in the relation to another resource). But not every resource needs to exhibit the property or stand in the relation. Some guidelines for choosing properties/relations include:

- Features that are of interest or concern to the communities who have a stake in the resource or its use.
- Properties that have discriminatory power for your resources (i.e., those which highlight contrasts or divide the resources into categories.
- Features that offer interesting or instructive descriptive problems

The aims of this assignment are to consider resource properties and relations independently of how they are expressed or encoded in descriptive records, and to consider the importance of properties’ discriminatory power and interest to users in a specific context.

Assignment 4: Entity Identification and Property Domains

This assignment is due March 11.
For each of the five properties or relations you identified in the last assignment, give a precise, natural language account of that property’s domain. That is to say, write a short description (in careful English) of what kind of things can have that property.
Next write a brief analysis of how the domains of these properties relate to each other, and make an attempt to propose identity conditions for each type of thing.
The aim of this assignment is to attempt a discrimination among levels of analysis for your resources, similar to the proposals we’ve considered for works, texts, and documents.

Assignment 5: Property Codomains and coded symbols

This assignment is due April 1.
For each of the five properties or relations you identified in assignment 3, give a precise, natural language account of that property’s codomain. That is to say, write a short description (in careful English) of what kinds of things would serve as values on that property or relation for entities in the property domain.
Next propose one or more strategies for denoting or encoding elements of each codomain, or expressing surrogates for those elements.
The aim of this assignment is to consider expression or surrogation choices independent of any particular descriptive standard or artificial language.

**Assignment 6: Preliminary resource description: property values**

This assignment is due April 15.

Create written descriptions for your resources in terms of the properties that you have identified. In this assignment use natural language, not a formal notation.

Make an initial attempt at specification for each of your resources what values (if any) and at what levels of abstraction those resources take values on the properties that you have identified. No specific record syntax or serialization is required—natural language is fine. If you prefer some sort of tabular or bulleted list layout works for you, that’s great. But start abstractly, thinking about what property values go with what resources, on which ever properties are appropriate.

The aim of this assignment is to plan the content of resource descriptions before expressing them in an artificial language.

**Assignment 7: Description record syntax**

This assignment is due April 29.

Create a syntactically conforming expression of the resource-property-value assignments from the last assignment into a notation of your choice. “Syntactically conforming” means a well-formed expression that is governed by some grammar or schema. Choice (or invention) of the particular grammar or schema should be documented in a few short paragraphs that include a discussion of the choice/design as it relates to the resources, their properties, and the audience for the encoded records. If you chose an existing syntactic schema or specification, include links or directions to its formal definition and documentation. If you invent one of your own, include the definitions as a separate attachment.

Examples of acceptable notations include (but are not limited to) the following:

- Colloquial XML conforming to a DTD or XML schema
- RDF serialized in XML, or N3/Turtle.
- Strings conforming to a regular or context-free grammar (as described in the Rosen reading)

The aims of this assignment are to gain practice in the selection and use of precise descriptive notation.

**Attendance and Class Participation**

The class participation grade is based on consistent attendance, contribution to in-class and/or online discussions, and providing assistance to classmates outside of class. Please alert the instructor if a classmate has been of help to you outside of class. Class participation also includes a required (but not graded) nomination of three ICES questions for the final course evaluation. The instructor will provide a link to the ICES question catalog.

**Term Project**

Students enrolled for four units must complete a term project on a topic approved by the course instructor. The term project is a work of academic writing, approximately ten to twenty pages in length, exploring a problem or issue in resource description (e.g., identity, derivation, intentionality, etc.). Students are encouraged (not required) to frame the project as a case study growing out of the earlier homework assignments, but situated with respect to a broader and more general review and analysis of the focal problem. Project proposals are due no later than March 4, but students are encouraged to open a dialogue with the instructor and with classmates well in advance of that date.
COURSE CALENDAR

Part I: Introduction to the class

Professional identity. Change and reform in technology and practice.

Readings: Syllabus

January 14

Part II: No class meeting: MLK holiday

January 21

Part III: Resources: concrete and ideal

Types, tokens, properties and relations.

Readings: Jubien 1997, ch. 2–3

Resource domain/genre description: Due 5:00pm, CST

January 28

Part IV: Resources: social objects and social facts

Readings: Smith, 2012; Ferraris, 2011

February 4

Part V: The nature of description

DCMI model, RDF

Readings: Powell et al., 2004; Tauberer, 2008

Ten resources for description: Due 5:00pm, CST

February 11

Part VI: Bibliographic Entities

Works, texts, editions, items

Readings: Svenonius, ch 3; IFLA, 1998; Smiraglia, 2001 ch. 1–2

February 18

Part VII: Identity and Identifiers

URIs, handles, the identity relation

Readings: Jubien ch. 4, Kahn, 2006; Thompson, 2010

February 25
Five resource properties: Due 5:00pm, CST

Part VIII: Data representation and expression  
March 4

Data, metadata, data sets

Readings: Readings TBA

Project Proposal: Due 5:00pm, CST

Part IX: Standards and Specifications  
March 11

d e jure vs. de facto standards, reference models and profiles.

Readings: Libicki, 1994; Birnbaum 1996

Entity identification and property domains: Due 5:00pm, CDT

Part X: Spring Break  
March 18

No class meeting

Part XI: Artificial Languages 1: Semantics  
March 25

Sense, reference, interpretation

Readings: Bach, 1989 chapters 1–2

Nominate ICES Questions: Due 5:00pm, CDT

Mid-semester evaluation: Due 5:00pm, CDT.

Part XII: Artificial Languages 2: Syntax  
April 1

Grammars, well-formedness

Readings: Rosen, 1988 section 10.1

Property codomains and coded symbols: Due 5:00pm, CDT

Part XIII: Schemas and Syntax  
April 8

Validation, XML, RDF

Readings: Kelly, 2006; RDF Primer
Part XIV: Record structure and serialization

Files and databases

Readings: Z39.2; Jardine, 1984

Preliminary resource description: Due 5:00pm, CDT

Part XV: Subject languages

concepts, syndetic structure

Readings: Iyer 1995, ch.5; SKOS Primer

Part XVI: Wrap-up and Project Presentations

Description record syntax: Due 5:00pm, CDT

Term project: Due May 7 at 5:00 PM, Central Daylight Time

READING ASSIGNMENTS


