Syllabus INLS 520
Information Organization, Fall 2015

Instructor: Jacob Hill
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Class Meeting: 014 Manning Hall, Wednesday 12:20-3:05
Office Hours: By appointment

Course Text:

Glushko, R. J., Hemerly, J., Maloney, M., McPherson, K., Petras, V., Shaw, R., & Wilde, E. (2013). The Discipline of Organizing. (R. J. Glushko, Ed.). Cambridge, MA: MIT Press. *Any edition will do

Course Description:
This course is an introduction to the conceptual foundations of information organization and retrieval: identifying things, describing things, grouping things, relating things, and selecting things. Traditionally these things have been textual documents–in the narrow sense: books, periodicals, letters, administrative records, etc.—the kinds of things organized by libraries and archives. But the principles that underlie organization in libraries and archives can be generalized and applied to organize documents and information more broadly, in a variety of contexts. To emphasize what these contexts have in common, rather than how they differ, we will use the abstract notion of an organizing system.

An organizing system is an intentionally arranged collection of resources and the interactions they support. Explicitly or by default, an organizing system makes many interdependent decisions about the identities of things of interest and the ways they are represented as "information." The organizing system defines how things will be named and described, how they can be grouped and related, and how people or software can create, transform, combine, compare and otherwise use these names, descriptions, groups and relations. When considering how to make these decisions, we can ask five questions: What is being organized? Why it is being organized? How much is it being organized? When is it being organized? By whom (or by what computational processes) it is being organized?

Strategies and Activities Development:
The content will be taught and learned through various methods including readings, short lectures, in class activities, assignments, and tests. I will not fully adopt a "flipped classroom" approach, but at times the underlying philosophy will be applied. Students will have approximately 40 pages of reading each week. Reading should be done before the class for which they are assigned. When teaching technical concepts, students will read tutorials as homework and come to class prepared to work. They will demonstrate and practice what they have learned through in-class group assignments. Short lectures will be used to introduce broad concepts or discuss overarching themes and arguments and these concepts will be internalized through in-class games and group activities. Finally, tests and assignments will be used to

assess the degree to which the students have mastered the content and applied it to a given problem.

Learning Objectives:

1. Students will acquire a basic understanding of several problems in Information Organization and different solutions that have been developed to address these problems.
2. Students will gain an understanding of different data meta models and hybrid models and the strengths and weaknesses of each model.
3. Students will gain a basic working knowledge of Metadata, XML, RDF, and Ontologies and be able to apply this understanding in building a basic web application.

Course Policies:

I will come to every class prepared and I expect the same from you. I have assigned a moderate amount of reading with the expectation that students will read carefully (unless otherwise stated). Much of the class time will be spent mastering difficult concepts individually and through group assignments. Attendance and participation is 30% of your grade. Short quizzes and/or other assessments may be given on the readings. If you are not prepared for class, you will have difficulty mastering the material and it will show in your final grade. You will need a laptop in class to complete many of the assignments, however, they can also be a distraction. During lectures, you may be asked to close your laptops.

Assignments can be submitted to me by email or through Sakai. Late assignments will be penalized at 5% per day. If you have a genuine problem and cannot submit an assignment on time, please contact me. If you get started early and have a genuine problem that prevents you from submitting the assignment on time, I will consider the circumstances in grading your assignment. If you wait until the last minute to start and then you have a genuine problem, you will still be penalized for each day the assignment is late.

Policies on Academic Integrity and Diversity:

Chapel Hill has had a student-administered honor system and judicial system for over 100 years. Because academic honesty and the development and nurturing of trust and trustworthiness are important to all of us as individuals, and are encouraged and promoted by the honor system, this is a most significant University tradition. More information is available at http://studentconduct.unc.edu/honor-system

The UNC Honor Code is in effect for all work in this course. Chapter 5 of the “Instrument of Student Judicial Governance” (https://studentconduct.unc.edu/sites/studentconduct.unc.edu/files/documents/Instrument.pdf) discusses Academic Dishonesty; you are responsible for being familiar with, and abiding by all aspects of the "Instrument".

Grading Breakdown & Policies:

Attendance & Participation 30%
Assignment One 10%
Assignment Two 10%
Assignment Three 10%
Assignment Four 10%
Midterm Exam 15%
Final Exam 15%

The following grade scale will be used **AS A GUIDELINE** (subject to any curve) for undergraduate students. Definitions are from: http://registrar.unc.edu/academic-services/grades/explanation-of-grading-system/ (underlining is my emphasis)

Grade Range	Definition
A 90-100%	Mastery of course content at the highest level of attainment that can reasonably be expected of students at a given stage of development. The A grade states clearly that the students have shown such outstanding promise in the aspect of the discipline under study that he/she may be strongly encouraged to continue.
B 80-89.9%	Strong performance demonstrating a high level of attainment for a student at a given stage of development. The B grade states that the student has shown solid promise in the aspect of the discipline under study
C 70-79.9%	A totally acceptable performance demonstrating an adequate level of attainment for a student at a given stage of development. The C grade states that, while not yet showing unusual promise, the student may continue to study in the discipline with reasonable hope of intellectual development.
D 60-69.9%	A marginal performance in the required exercises demonstrating a minimal passing level of attainment. A student has given no evidence of prospective growth in the discipline; an accumulation of D grades should be taken to mean that the student would be well advised not to continue in the academic field.
F 0-59.9%	For whatever reason, an unacceptable performance. The F grade indicates that the student's performance in the required exercises has revealed almost no understanding of the course content. A grade of F should warrant an advisor's questioning whether the student may suitably register for further study in the discipline before remedial work is undertaken.

The following grade scale will be used AS A GUIDELINE (subject to any curve) for graduate students. Definitions are from: http://registrar.unc.edu/academic-services/grades/explanation-of-grading-system/

Grade Range	Definition
H 95-100%	High Pass
P 80-94.9%	Pass
L 70-79.9%	Low Pass
F 0-69.9%	Fail

Communications:
The best way to get in contact with me (other than talking to me after class or during my office hours) is by email: jthill@live.unc.edu. Note that I receive a large amount of email and while I try to reply to student emails within 48 hours, there are times that it may take me 2-3 days to reply, especially on weekends. Therefore, it is important that you get started on assignments early, so there is time for me to respond to any questions you may have. I cannot guarantee that I will be able to answer last-minute questions (e.g., within 2 days of the assignment due date). You may also call or text me at 702-335-2653.

Emails and phone calls are both good ways of letting me know if you can't be in class, or if you want to make an appointment with me. If you want to discuss something we talked about in class, an assignment or some other matter, I prefer we meet in person. Please make an appointment with me.

Schedule of Classes

August 19
Foundations for Organizing Systems
Readings:
Glushko Chapter 1

August 26
Activities in Organizing Systems
Readings:
Glushko Chapter 2
A New Initiative on Precision Medicine
Modern Data Platform for Precision Medicine

September 2 ~ **Assignment 1**
Resources in Organizing Systems
Readings:
Glushko Chapter 3
What Emotions Are (And Aren't)

September 9

Resource Description and Metadata

Readings:

Glushko Chapter 4

Graph Theory Key to Understanding Big Data?

September 16

Describing Relationships and Structures

Readings:

Glushko Chapter 5

September 23 ~ **Assignment 2**

Categorization: Describing Resource Classes and Types

Readings:

Glushko Chapter 6

September 30

Classification: Assigning Resources to Categories

Readings:

Glushko Chapter 7

October 7

Midterm

October 14

Introduction to XML

Readings:

XML in 10 points

Introduction to XML

October 21 ~ **Assignment 3**

Continuing with XML / Introduction to JSON

Readings:

JSON Basics: What You Need to Know

JSON Tutorial

October 28

The Semantic Web

Readings:

Allemang & Hendler Chapters 1-3

November 4

The Forms of Resource Descriptions

Readings:

Glushko Chapter 8

November 11 ~ **Assignment 4**

Interactions with Resources

Readings:

Glushko Chapter 9

November 18
Readings TBD

November 25 (No Class, Thanksgiving Break)

December 2
Review for Final Exam