Syllabus

Department: Division of Library and Information Science

Course Number and Title: LIS 230 Introduction to Digital Libraries

Bulletin Description: [25 words maximum]

This course provides knowledge required to understand the processes and techniques involved in creating, organizing, presenting, and using information within the digital library environment.

Prerequisite(s): None
Co-requisite(s): None

Course Objectives:
Objective 1: To equip Digital Librarians with the basic concepts & terminology pertaining to Digital Librarianship
    - **Learning Outcome:** Upon completion of this course students will be able to demonstrate knowledge of the basic concepts and terminology pertaining to digital librarianship
- **Objective 2:** To equip future Digital Librarians with the basic skill-sets to effectively deal with challenges within the field of Digital Libraries as they develop digital collections, including information organization & access, digitization & computer automation, and standards for data sharing
    - **Learning Outcome:** Upon completion of this course students will be able to define and provide examples of challenges facing Digital Librarians as they develop digital collections, including information organization & access, digitization & computer automation, and standards for data sharing
- **Objective 3:** To provide future Digital Librarians with an opportunity to explore the digital environment by understanding such issues as intellectual property, copyright, and integrated collections management systems
    - **Learning Outcome:** Upon completion of this course students will understand the digital library environment by engaging in real-world intellectual property rights, copyright, and integrated collections management systems

Program Goals and Outcomes:
1B) Understand the history of human communication and its impact on libraries, and the importance of effective verbal and written advocacy for libraries, librarians, other library workers and library services.
1D) Demonstrate effective communication techniques (verbal and written) used to analyze complex problems and create appropriate solutions.
3A) Understand the principles involved and the developmental, descriptive, and evaluative skills needed in the organization, representation and retrieval of recorded knowledge and information resources.
3B) Demonstrate ability to organize recorded knowledge and information using the systems of cataloging, metadata, indexing, and classification standards and methods.
4A) Acquire, apply, analyze and assess information, communication, assistive, and other technological skills related to resources, service delivery, professionalism, efficacy, and cost-efficiency of current technologies and relevant technological improvements.

5B) Understand and demonstrate ability to interact successfully with individuals of all ages and groups to provide consultation, mediation, and guidance in their use of recorded knowledge and information, including information literacy techniques and methods.

Units of Instruction:

Date	Topic	Assignments
Week 1	INTRODUCTION ➢ Fall 2014 Classes Begin ➢ Introduction to Digital Objects Readings: ➢ Buckland (1997, 1991) ➢ Rayward (1994) ➢ Besser (2003)	AS-L Pre-Reflection Letter (5pts) AS-L Community & Project Defined (5pts) Discussion Question 1 (5pts extra credit)
Week 2	HISTORY OF DLs ➢ Introduction to Digital Libraries (DL) ➢ Research Streams that Fed into Early DL Work ➢ Digital Library Initiative 1&2 ➢ Funding Agencies ➢ Major DL Projects ➢ Evolution of Services Readings: ➢ Witten et al., Ch 1 (2010) ➢ Wattenberg (1998) ➢ Griffin (1998) ➢ Greenstein & Thorin (2002) ➢ Angel (2011) ➢ Kenny, Rieger & DeMello (2000-2003)	DL Project Defined (5pts)
Week 3	CONCEPTUAL MODELS, FRAMEWORKS & DEFINITIONS ➢ The DL Reference Model ➢ The 5S Framework ➢ Comparison ➢ DELOS Classification ➢ CIDOC Conceptual Reference Model Readings: ➢ Borgman (1999) ➢ Levy (2000) ➢ IFLA (1997) ➢ Oppenheim & Smithson (1999) ➢ Goncalves (2007) ➢ Chen (1970)	Reference Model Exercise (5pts)
Week 4	DIGITAL OBJECTS I: THE BASICS ➢ Textual Resources ➢ Multimedia (Audio & Video) ➢ Images (2D & 3D)	Discussion Question 2 (5pts extra credit) DL Mission Statement (5pts)

	Readings: ➢ Library of Congress (2007) ➢ McDonald & Shearer (2006) ➢ Witten et al., Ch. 4 & 5 (2010) ➢ Kenney & Rieger, Ch. 1 (2000)	
Week 5	DIGITAL OBJECTS II: FILE FORMATS, TRANSFORMATION & MIGRATION ➢ Key Terms ➢ File Formats ➢ Emulation ➢ Transformation & Migration ➢ Emulation versus Migration ➢ Preservation Issues Readings: ➢ Arms (2007) ➢ Rieger (2008) ➢ Van Wijk (2006) ➢ Rothenberg (1999) ➢ CCSDS (2002) ➢ Kenney & Rieger, Ch. 8 (2000)	Descriptive Metadata Exercise (10pts)
Week 6	COLLECTION DEVELOPMENT ➢ Selection Policies ➢ Digitization/Digitization Chain ➢ Document & E-Publishing Presentation Markup Readings: ➢ Kenney Ch. 2 & 3 (2000) ➢ Brogan (2006) ➢ CLIR (2001) ➢ Smith (1999) ➢ CLIR (2008) ➢ Hirtle (2008) ➢ Lynch (2001) ➢ NISO (2007) ➢ Ooghe & Moreels (2009)	DL Collection Development Policy (5pts) AS-L Project Midterm Review (5pts)
Week 7	KNOWLEDGE ORGANIZATION ➢ Information Architecture ➢ Metadata ➢ Ontologies, Classification, Categorization ➢ Subject Description, Vocabulary Control, Thesauri, Terminologies ➢ Object Description & Organization for a Specific Domain	Metadata Crosswalk Exercise (5pts) Five DL Objects w/ Signed Copyright (5pts)

	Readings: ➢ Cantara (2005) ➢ Duval et al. (2002) ➢ Gazan (2008) ➢ NISO (2004) ➢ Witten et al., Ch. 6 (2010) ➢ Elings & Waibel (2007)	
Week 8	INFORMATION ARCHITECTURE ➢ Architecture Overview ➢ Application Software ➢ Identifiers, Handles & DOIs ➢ Protocols ➢ Interoperability ➢ Security Readings: ➢ Arms et al. (1997) ➢ Reilly & Tupeol-Schneck (2010) ➢ Witten et al. (2001)	Comparative Analysis Exercise (10pts) DLIS Fall Symposium Extra Credit Presentation (10pts)
Week 9	USER BEHAVIOR/INTERACTIONS ➢ Information Needs/Relevance ➢ Online Info Seeking Behavior & Search Strategies ➢ Sharing, Networking, Interchange ➢ Interaction Design & Usability Assessment ➢ Information Summarization & Visualization Readings: ➢ Bollen & Luce (2002) ➢ Borgman (2000), Ch. 5 ➢ Covey (2002) ➢ Kenny et al., (2003)	DL Narratives (5pts)
Week 10	INFORMATION SERVICES ➢ Indexing & Searching ➢ Image Retrieval ➢ References Services ➢ Recommender Systems ➢ Routing ➢ Web Publishing ➢ Crawling Readings: ➢ Janes Ch. 4 (2003) ➢ Penka (2003) ➢ Lavoie, Henty & Dempsey (2006) ➢ Lossau (2004)	DL Descriptive Metadata (5pts)

	➢ Monnich & Spiering (2008)	
Week 11	PRESERVATION ➢ Web Archiving ➢ Sustainability ➢ File Formats, Transformation, Migration Readings: ➢ CLIR (2004) ➢ Hamilton (2004) ➢ Henty (2007) ➢ Rosenthal et al., (2005)	Discussion Question 3 (5pts extra credit)
Week 12	MANAGEMENT & EVALUATION ➢ Project Management ➢ DL Case Studies ➢ DL Evaluation & User Studies ➢ Bibliometrics & Webometrics ➢ Legal Issues ➢ Cost/Economic Issues ➢ Social Issues Readings: ➢ Arms Ch. 6 (2000) ➢ Covey (2005) ➢ Coyle (2004) ➢ Holley (2010) ➢ Lesk Ch. 9 (2005) ➢ Lynch (2003) ➢ Witten (2004)	AS-L Project Final Review (10pts)
Week 13	NO CLASSES ➢ Thanksgiving Break	---
Week 14	DL EDUCATION & RESEARCH ➢ Future of DLs ➢ Education for Digital Librarians ➢ Conceptual Frameworks, Models, Theories, Definitions ➢ DL Research Initiatives Readings: ➢ Borgman (2001) ➢ Choi & Rasmussen (2006) ➢ Digital Library Toolkit Ch. 9 (2003)	Final DL Project (final pts tallied) AS-L Post-Reflection (5pts)
Week 15	FINAL EXAM WEEK ➢ Final Projects Due	Final (ePortfolio) (20pts)

Bibliography:

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Poster of Visualization (PDF)
Metadata Standard Glossary, Poster Form (PDF)
Metadata Standard Glossary, Pamphlet Form (PDF)

Harpring, Patricia (2010). Introduction to Controlled Vocabularies: Terminology for Art, Architecture, and Other Cultural Works.

Baca, Murtha & Harpring, Patricia (2009). Categories for the Description of Words of Art.

Baca, Murtha (Ed.). (2008). Introduction to Metadata.

Week 1: Introduction

Besser, H. (2003). *Introduction to imaging* (rev. ed.). Los Angeles, CA: Getty Research Institute. Available at http://www.getty.edu/research/conducting_research/standards/introimages/index.html

Buckland, M. K. (1991). Information as thing. *Journal of the American Society for Information Science*, 42(5), 351-360.

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Week 2: History of Digital Libraries

Angel, C. M. (2011). Gap analysis of the University of South Carolina's Digital Collections Department. *OCLC Systems & Services Information*, 27(2). 99-112. doi: http://dx.doi.org/10.1108/10650751111135409

Greenstein, D. & Thorin, S. (2002). *The digital library: A biography*, Council on Library and Information Resources, Digital Library Federation, Washington, DC, available at: www.clir.org/pubs/reports/pub109/pub109.pdf

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Week 3: Conceptual Models, Frameworks & Definitions

Borgman, C. L. (1999). What are digital libraries? Competing visions. *Information Processing & Management*, 35(3), 227-243.

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Goncalves, M. A., Moreira, B. L., Fox, E. A. & Watson, L. T. (2007). What is a good digital library? A quality model for digital libraries'. *Information Processing & Management,* 43(5), 1416-1437.

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Tsakonas, G, Kapidakis, S., Papatheodorou, C. Evaluation of User Interaction in Digital Libraries.' In M. Agosti & N. Fuhr (Eds.), *Notes of the DELOS WP7 workshop on the evaluation of digital libraries,* Padua, Italy, 2004. Available at http://dlib.ionio.gr/wp7/workshop2004_program.html

Week 4: Digital Objects I – The Basics

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Kenney, A. R. & Rieger, O. Y. (2000). Introduction: Moving theory into practice **Chapter 1**. In A. Kenney & O. Rieger (Eds.), *Moving theory into practice: Digital imaging for libraries and archives* (pp. 1-10).

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Week 5: Digital Objects II – File Formats, Transformation & Migration

Arms, C. R. & Fleischhauer, C. (2007). *Sustainability of digital formats: Planning for Library of Congress Collections.* Located at http://www.digitalpreservation.gove/formats/index.shtml

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Week 6: Collection Development

Brogan, M. L. (2006). *Context and contributions: Building the distributed library.* Washington, DC: DLF. Available at http://www.diglib.org/pubs/dlfl06/dlfl06.pdf

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Week 7: Knowledge Organization

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Week 8: Information Architecture

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Week 9: User Behavior/Interactions

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Week 10: Information Services

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Week 11: Preservation

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Week 12: Management & Evaluation

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Lesk, M. (2005). Economics. In M. Lesk, *Understanding digital libraries* (pp. 261-291). San Francisco, CA: Elservier Inc. **Chapter 10**

Nicholson, S. (2004). A conceptual framework for the holistic measurement and cumulative evaluation of library services. *Journal of Documentation*, 60(2), 164-182. doi: http://dx.doi.org/10.1108/00220410410522043

Reeves, T. et al. (2003). Evaluating digital libraries: A user-friendly guide. University Corporation for Atmospheric Research: national Science Digital Library. Available at http://www.dpc.ucar.edu/projects/evalbook/EvaluatingDigitalLibraries.pdf

Witten, I. H. (2004). Digital library futuristics: Developing countries, universal access, and information for all. *International Conference on Digital Libraries*, 2, pp. 962-968, Dew Delhi, India. Retrieved from http://tinyurl.com/2dends

Week 13: No Classes – Thanksgiving Break

Week 14: Digital Library Education & Research
Borgman, C. L. (2001). Where is the librarian in the digital library? *Communications of the ACM*, 44(5), 66-67.

Digital Library Toolkit. (2003). Chapter 9: Future trends and research. 3rd ed. Sun Microsystems, 119-145. Available at http://www.ncsi.iisc.ernet.in/raja/is214/is214-2005-01-04/digital_library_toolkit-ed3.pdf

IFLA Study Group on the Functional Requirements for Bibliographic Records. Functional Requirements for Bibliographic Records: Final Report. September 1997. Available at http://www.ifla.org/publications/functional-requirements-for-bibliographic-records

Week 15: Final Exam Week

Instructional Time Requirements: 150 hours for 3 credits (10 hours per week for our 15 week semester)

Asynchronous or synchronous Lecture
Assigned weekly reading
Weekly assignments (individual and group)
Active participation in online discussions
Research for semester-long projects (term papers, projects)
Presentations (online or face to face)
Academic Service-Learning projects (where appropriate)