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LIS Library and Information Science

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- LIS 510 CHILDREN'S LITERATURE AND RELATED MATERIALS. (3)**  
A survey of children's literature, traditional and modern. Reading and evaluation of books with multimedia materials with emphasis on the needs and interests of children. Covers media for use by and with children from preschool through grade six.
- LIS 514 LITERATURE AND RELATED MEDIA FOR YOUNG ADULTS. (3)**  
A study of literature and related materials for use with young people in grades 6-12. Emphasis is placed on the special characteristics and needs of young people and the evaluation of materials for this age group. (Same as EDC 504.)
- LIS 600 INFORMATION IN SOCIETY. (3)**  
Students investigate the Information Society and its relationships with our world including the impact on information organizations and communities. Students focus on the discipline's ethics, values, and core concepts.
- LIS 601 INFORMATION SEARCH. (3)**  
Within given theoretical contexts, students search and retrieve organized information. Students learn to construct, apply, and critically evaluate advanced information search and retrieval strategies.
- LIS 602 KNOWLEDGE ORGANIZATION. (3)**  
Students describe and classify recorded knowledge and learn fundamental principles and practices that facilitate access and retrieval.
- LIS 603 MANAGEMENT IN INFORMATION ORGANIZATIONS. (3)**  
Students learn and apply the basic elements of management and leadership within the context of information organizations.
- LIS 604 LIBRARY AND BOOK HISTORY. (3)**  
Development of libraries and books from earliest time to the present with special reference to their relationship to contemporary social, economic, cultural and political trends. Emphasis is given to American library and book history.
- LIS 605 INFORMATION POLICY AND TECHNOLOGY REGULATION. (3)**  
This course explores the socio-cultural, economic and political issues confronting communication and information professionals and the transformative impact of these issues on information policy development. The rapidly evolving communication and information infrastructure and the global shift to an information society will provide the context for the course. Within this context, emphasis will be placed on issues of access, which includes, universal service, intellectual freedom, intellectual property rights, privacy, security, advocacy, equity, and the role of library and information professionals and organizations in policy formulation.
- LIS 608 METHODS OF RESEARCH IN LIBRARY AND INFORMATION SCIENCE. (3)**  
Basic tools, techniques and methods of research. Consideration is given to the role and purpose of research in library and information science and its relationship to research in other disciplines. Includes critical evaluation of current research in library and information science and the development of a research proposal. Prereq: LIS 601, LIS 602 or consent of instructor.
- LIS 609 CURRENT PROBLEMS IN LIBRARY AND INFORMATION SCIENCE. (3)**  
A seminar which examines current philosophical and managerial issues in library and information science. Focus is on the analysis, origins, evaluation and current status of these issues. Prereq: Eighteen hours of graduate study in LIS or consent of instructor.
- LIS 610 LIBRARY MATERIALS AND LITERATURE FOR CHILDREN. (3)**  
A survey and historical study of library materials and literature for children up to grade 6. Students will engage in extensive reading, and in the evaluation of books and some multimedia materials. Basic programming will be explored.
- LIS 611 CRITICAL ANALYSIS OF CHILDREN'S LITERATURE. (3)**  
Advanced study of book evaluation, literary criticism, children's book publishing, awards, and current trends in the field. Individual projects require extensive critical reading. Prereq: LIS 610 or LIS 614 or consent of instructor.
- LIS 612 YOUTH LITERATURE FOR A DIVERSE SOCIETY. (3)**  
A survey and historical study of culturally diverse literature for youth of all ages. Students will engage in extensive reading, evaluation, and discussion of literature and the issues related to developing an understanding of various cultures and special populations within the United States. Prereq: LIS 610: Library Materials and Literature for Children (or comparable).

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**LIS 613 INFORMATION RESOURCES AND SERVICES FOR CHILDREN. (3)**

A study of effective programming for children and young adults. Emphasis is placed on oral presentations. Literature-based activities and community outreach.

**LIS 614 LIBRARY MATERIALS AND LITERATURE FOR YOUNG ADULTS. (3)**

A study of literature and related materials for use with young people in grades 7-12. Emphasis is placed on the special characteristics and needs of young adults and the evaluation of materials for this age group.

**LIS 621 INFORMATION RESOURCES AND SERVICES. (3)**

This course provides an introduction to the theory and practice of information services, which are defined broadly as the activities in which information professionals engage to connect people to the information they need, including information needs assessment, direct information provision, information literacy instruction, and intermediation for all stages of the information search process. Emphasis is placed on the roles played by information professionals to help diverse users define and negotiate their information needs, navigate user-system interfaces, formulate effective search strategies for information retrieval, and evaluate and select information. Attention is also given to the skills necessary to plan for, implement, and evaluate the delivery of information services in a wide variety of organizational contexts. The ethical foundations of information services are also considered. Prereq: LIS 601.

**LIS 622 SOCIAL SCIENCE INFORMATION. (3)**

Examination of important issues and developments relating to creation, packaging, dissemination and use of social science information by various segments of society. Emphasis on understanding information needs of those who use social science information and information systems, source and services available to satisfy those needs. Prereq: LIS 601 or consent of instructor.

**LIS 623 ADVANCED REFERENCE SERVICES. (3)**

This course provides advanced study of the theory and practice of information services, which are defined broadly as the activities in which information professionals engage to connect people to the information they need, including information needs assessment, direct information provision, information literacy instruction, and intermediation for all stages of the information search process. Emphasis is placed on the structure of information, information seeking, and information sources within disciplines. Students will be prepared to help advanced users define and negotiate their information needs, navigate user-system interfaces, formulate effective search strategies for information retrieval, and evaluate and select information. Ethical issues in information services are also considered. Prereq: LIS 601, LIS 622.

**LIS 624 INFORMATION IN SCIENCE AND TECHNOLOGY. (3)**

The content and structure of bibliographic and other information resources in science and technology. A consideration of formal and informal communication in science and technology with emphasis on sources and services in agriculture, astronomy, biology, chemistry, mathematics, natural resources, zoology, and other closely related subjects. Prereq: LIS 601 and LIS 602 or consent of instructor.

**LIS 625 INFORMATION LITERACY INSTRUCTION. (3)**

This course examines the theory and practice of instruction provided in information organizations to develop clients' abilities to effectively locate, evaluate, select and use information. Attention is given to the nature of information literacy, systematic instructional design, needs assessment, methods of instruction, teaching and learning preferences, and the evaluation of learning and programs. This course is interdisciplinary and draws on theory from Library & Information Science, Instructional Communication, Education and Cognitive Psychology. We will examine and criticize various instructional models, plan for and deliver instruction in both in-person and computer-aided venues, learn various methods for assessing teaching and learning, and discuss the managerial and political aspects of instructional delivery in various information agency contexts, with a special emphasis on those in academic settings. Prereq: LIS 601 or consent of instructor.

**LIS 626 ELECTRONIC INFORMATION RESOURCES IN THE HEALTH SCIENCES. (3)**

Survey of electronic information resources in the health sciences, including databases and Web sources. Discussion of relevant controlled vocabularies and their use in formulating and executing search strategies. The course also includes an evidence based health care component whereby students learn to analyze critically the biomedical literature and determine reference and research relevancy. (Same as ICT 626.)

**LIS 627 CONSUMER HEALTH INFORMATION RESOURCES. (3)**

History and development of consumer health information resources; role of professional and governmental agencies in provision of consumer health information; policy issues related to provision of consumer health information. Consumer health professional literature, user information needs, user resources, and information services. Identification, selection, utilization, and evaluation of consumer health information for special populations within specialized educational and healthcare settings. Trends and issues in consumer health informatics. (Same as ICT 627.)

**LIS 629 INTRODUCTION TO MEDICAL INFORMATICS. (3)**

This course is designed to introduce the interdisciplinary field of medical informatics to health information professionals. Medical Informatics is a developing field that essentially seeks to apply information and computing technologies to improve all aspects of healthcare, including patient care, research, and education. During the semester we will explore a number of topics central to understanding the field, including: the nature of biomedical information, the electronic medical record, the role of information and computing technologies to support clinical decision making, healthcare and informatics standards, information retrieval, system analysis and technology assessment, and essential issues of information technology in medical education and medical ethics. By the end of this Web-based course, students are expected to be able to understand broad aspects of the field and can use this as a foundation for further education, training, and work in health information professions. (Same as CI 629.)

**LIS 630 INFORMATION RETRIEVAL. (3)**

This course reviews important information retrieval (IR) theories and models; explores a brief history of IR research; and examines various IR applications. Students will get familiar with IR foundations such as document indexing or query expansion/optimization strategies, as well as understand overall system architectures for selected IR applications. Students will explore how to analyze and compare IR systems, how to select the best IR systems for particular tasks and how to design a prototype for an efficient IR system. Prereq or concur: LIS 636 or LIS 637 or LIS 638. (Same as ICT 630.)

**LIS 634 INFORMATION ARCHITECTURE. (3)**

The course introduces the concepts and practices of information architectures (IA) for a Web site within the context of the organization it serves. It aims to acquaint students with principles and process of information architecture for user-centered design of websites. It also provides students the opportunity to develop practical skills related to the design of information organization and navigation systems. The course prepares students for the companion technical course of "content management systems" where they will apply the theories and techniques studied in this course to the implementation of a fully functional website.

**LIS 636 FOUNDATIONS OF INFORMATION TECHNOLOGY. (3)**

A study of the computing fundamentals necessary for the understanding and use of information technology. Focus is on examining computer systems in concept and practice, which is essential to information professionals. Topics include how computers represent, process, store and retrieve information; how operating systems control these processes, interpret commands, present the user interface, and run applications; how databases are designed and created; how general understanding of programming processes and productivity software skills is important in a variety of professional contexts. Productivity applications include the Office suite, Internet applications and web publishing, and database management systems.

**LIS 637 INFORMATION TECHNOLOGY. (3)**

Study of computer and communication technology used in modern information storage and retrieval systems. Consideration also given to managing microcomputer services, hardware evaluation and selection, and system security. Prereq: Consent of instructor. (Same as CI 637.)

**LIS 638 INTERNET TECHNOLOGIES AND INFORMATION SERVICES. (3)**

A course examining the structure, development and evolution of the Internet; network protocols and client/server architecture issues; Web page design, authoring, and evaluation; the use of the Internet as an information storage and retrieval system; recent advances in HTML and scripting languages; and Internet related social issues such as censorship and copyright. Prereq: LIS 636 or consent of instructor. (Same as CI 638.)



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### **LIS 655 ORGANIZATION OF KNOWLEDGE I. (3)**

Theories and practice of bibliographic description and subject analysis. Covers the organization of both print and electronic information, including use of Anglo-American Cataloging Rules, Dewey Decimal Classification, Library of Congress Classification and Library of Congress Subject Headings. Prereq: LIS 602 or consent of instructor.

### **LIS 656 ORGANIZATION OF KNOWLEDGE II. (3)**

In-depth coverage of the theories and practice of bibliographic description and subject analysis. Covers the organization of both print and electronic information and authority control. Emphasis is on problems in practice, special case studies, current issues and future trends of description, subject analysis and online authority control. Prereq: LIS 655, or consent of instructor

### **LIS 658 KNOWLEDGE MANAGEMENT. (3)**

Organizational knowledge is a valuable strategic asset. Knowledge management refers to the systematic management of an organization's knowledge assets so that they can be leveraged for sustainable advantage. This course examines how knowledge is created, captured, organized, diffused, and implemented in an organization. Topics covered include knowledge management processes and practices, corresponding technologies, collaboration tools, and people and cultural issues. (Same as ICT 658.)

### **LIS 659 COLLECTION DEVELOPMENT. (3)**

Intellectual and administrative aspects of building, maintaining and evaluating library collections. Topics include: library cooperation; national standards; the writing and implementation of collection policies; strategies of selection and evaluation; contemporary publishing and the book trade.

### **LIS 661 INTRODUCTION TO DATA SCIENCE. (3)**

This course will provide a foundation in the area of data science based on data curation and statistical analysis. The primary goal of this course is for students to learn data analysis concepts and techniques that facilitate making decisions from a rich data set. Students will investigate data concepts, metadata creation and interpretation, general linear method, cluster analysis, and basics of information visualization. At the beginning, this course will introduce fundamentals about data and data standards and methods for organizing, curating, and preserving data for reuse. Then, we will focus on the inferential statistics: drawing conclusions and making decisions from data. This course will help students understand how to use data analysis tools, and especially, provide an opportunity to utilize an open source data analysis tool, R, for data manipulation, analysis, and visualization. Finally, in this course we will discuss diverse issues around data including technologies, behaviors, organizations, policies, and society. (Same as ICT 661.)

### **#LIS 662 DATA ANALYSIS AND VISUALIZATION. (3)**

This course examines three major categories of topics in relation to data analysis and visualization. First, this course will cover the basic ways that data can be obtained from various sources, such as raw text files, web APIs, and data repositories. It will also cover the techniques of data cleaning and how to organize data for analysis. Second, the course will cover the essential techniques for analyzing quantitative data. It will teach prediction and clustering methods that are useful to solve various real data analysis tasks. In addition, students will learn major theories and recent methods in text analysis. Third, this course teaches how to create visualizations that effectively communicate the meanings behind data and information. The course will cover key practical skills in information visualization, such as plotting, mapping, and network visualization. This course will not be mathematically intensive. Instead, the course will use existing computational tools and programming libraries to solve various problems. You will use the R language and environment intensively for data analysis and visualization. (Same as ICT 662.)

### **LIS 665 INTRODUCTION TO DIGITAL LIBRARIES. (3)**

This course focuses on the theoretical, technological, human factors and evaluative components of digital library (DL) research and practice. Students will read and discuss literature on DLs, review existing technologies and proof-of-concepts implementation projects, and work as a group to develop a prototype but operational DL. This course is foundational for students wishing to engage seriously in the world of digital librarianship. Prereq: LIS 602, LIS 636.

### **LIS 668 DATABASE MANAGEMENT. (3)**

This course is designed as a first database course for students without any previous experience. The general aim of the course is to understand the basic concepts, principles, and hand-on experiences on database systems. The course will evolve from understanding, visualizing, and analyzing data. Then transition to understanding relational databases by designing and building databases using Access and querying using Structured Query Language (SQL). Prereq: LIS 636 or permission of instructor. (Same as CI 668.)

