



Independent Study IN IDAHO

LibS 419

Computer Applications in Libraries

**Independent Study in Idaho
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**The University of Idaho in statewide cooperation with
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Study Guide

Independent

Study IN IDAHO

PO Box 443225

Moscow ID 83844-3225

Self-paced study. Anytime. Anywhere!

LibS 419 **Computer Applications in Libraries**

University of Idaho
3 Semester-Hour Credits

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Independent Study in Idaho

This course is offered through the University of Idaho.

LibS 419: Computer Applications in Libraries

3 Semester-Hour Credits: UI

Welcome!

Whether you are a new or returning student, welcome to the Independent Study in Idaho (ISI) program. Before beginning this course, read the information provided below, including course description, prerequisites, required materials, course objectives, and information about lessons, exams, and grading.

Important!

As you read this section, you will see the following icon:



Use this icon to direct yourself to the **Appendix** in the back of this study guide for essential registration information, Independent Study in Idaho policies and procedures, and forms you will need to successfully complete this course. You are responsible for understanding and following ISI policies and procedures.



Turn to the **Appendix** now. Familiarize yourself with the information in the *Registration* section, student responsibilities in *Academic Integrity*, and the necessary forms. If there is anything you do not understand, please contact the ISI office for clarification before starting your course.

Course Description

Trends and developments in library automation; practical application of microcomputers to library work and administration.

Prerequisites

There are no prerequisites for this course.

Course Materials

Required Course Materials

- Burke, John J. *Neal-Schuman Library Technology Companion: A Basic Guide for Library Staff*. 2nd ed. New York: Neal-Schuman Publishers, Inc. 2006. ISBN 1-55570-550-2

Independent Study in Idaho course materials are available for purchase at the University of Idaho Bookstore. Visit the UI Bookstore's Web site, <http://www.uidahobookstore.com>, select *Textbooks, Independent Study* for a list of course materials. You may order online, by telephone, (208) 885-7334, or by e-mail to genbks@uidaho.edu.

Independent Study in Idaho courses are updated and revised periodically. Ordering course materials from the UI Bookstore at the time of registration allows you to purchase the correct edition(s) of textbooks, study guides, and supplemental materials. If purchasing textbooks from another source, refer to the ISBN(s) for the textbook(s) listed for this course to ensure that you obtain the correct edition(s).

If you have questions regarding the course materials you have ordered and received, contact the UI Bookstore.

Additional Course Requirements

- Internet access is required to successfully complete the lessons.
- Two library visits are required.

Course Introduction

This course is designed to familiarize students with basic terms and key concepts related to computers and information technology used in libraries; to acquaint students with reference works and Internet resources about computers and information technology; and to acquaint students with basic concepts of project management.

Course Objectives

To equip students to think, talk, and write about computers and information technology like a librarian.

Lessons

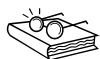
Overview

Most lessons include:

- Lesson objectives
- Reading assignment
- Key concepts and important terms
- Lecture
- Library and information literacy
- Written assignment
- Quiz

Study Hints

- Complete all assigned readings, in the textbook and online.
- For many of the assigned online readings, you will be asked to access the online encyclopedia, *Wikipedia*. To access *Wikipedia*, go to http://en.wikipedia.org/wiki/Main_Page and “search” the terms. (See “Wiki Software,” *Key Concepts and Important Terms*, Lesson 3.)
- Set a schedule allowing for completion of the course one month prior to your desired deadline. (An *Assignment Submission Log* is provided for this purpose.)
- I have relayed what I think is important in each lesson in the *Key Concepts and Important Terms* section of the lesson. I have supplemented the text and lecture material in the *Library and Information Literacy* section of each lesson.
- Note that the textbook contains a good glossary.
- I recommend that you approach the lesson components in the following order:
 - First, read the *Key Concepts and Important Terms* section carefully.
 - Next, read the *Reading Assignment* in the textbook, the *Lecture*, and the *Library and Information Literacy* section.
 - Then do the *Written Assignment*.
 - Finally, take the *Quiz*, for review purposes. It will help you prepare for the exam by testing your knowledge of previously covered important terms and concepts. ***For best results simulate taking the exam. Answer the questions without reference to books, notes, or computer files. Please submit all of the quizzes. They will be reviewed but not graded.***



See the **Appendix** at the back of this study guide for essential *ISI policies on submitting lessons to your instructor*. See your *Registration Confirmation Letter* for your instructor’s requirements: ***how to format and submit lessons, number of lessons you may submit at one time, and lesson guidelines.***

Exam

Overview

- There is only one examination for this course; a final, comprehensive exam. Quizzes are found in most of the lessons and are simply for review purposes; they are to be submitted, but are not graded. They will help you prepare for the examination by testing your knowledge of previously covered important terms and concepts.
- You must wait for grades and comments on lessons prior to taking the examination.
- For your instructor's exam guidelines, refer to your *Registration Confirmation Letter* and the *Exam Information* section in this study guide.

See *Grading* for specific information on exams, points, and percentages.

Choosing a Proctor/Scheduling Exams

The exam requires a proctor. You should choose a proctor at least one month prior to scheduling the exam. The exam may be taken online if you have a proctor who has a computer with Internet access.



See the **Appendix** for guidelines on *how to choose a proctor and schedule exams*.

Grading

The course grade will be based upon the following point system and considerations:

Lesson	Points	Percentage
Lesson 1	10	5%
Lesson 2	10	5%
Lesson 3	10	5%
Lesson 4	10	5%
Lesson 5	10	5%
Lesson 6	10	5%
Lesson 7	10	5%
Lesson 8	10	5%
Lesson 9	10	5%
Lesson 10	10	5%
Lesson 11	20	10%
Total	120	60%

Exam	Points	Percentage
Total	80	40%

The final course grade is issued after **all** lessons and exams have been graded.



See the **Appendix** for information about *confidentiality of student grades, course completion and time considerations*, and *requesting a transcript*.

About the Course Developer

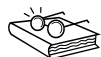
I am the Business Librarian at the University of Nebraska-Lincoln. I have a master's degree in Library Science from the University of Kentucky and a master's degree in Public Administration from the University of Georgia.

I grew up in Waco, Texas, and attended the University of Texas at Austin. In the 1970s, I served in the Army. After my discharge, I worked as a civilian employee of the Army for a number of years.

In 1979, I went to library school on the GI Bill. After I got my library degree in 1981, I went on to study public administration. I was a reference librarian at the University of Idaho for fifteen years, and I have been the Business Librarian at the University of Nebraska-Lincoln since 2004.

Contacting Your Instructor

You will receive *course and instructor contact information* in your *Registration Confirmation Letter*.



See the **Appendix** for detailed information on *contacting your instructor*.

Disability Support Services



See the **Appendix** for *information on Disability Support Services (DSS)*.

Assignment Submission Log

Readings: Neal-Schuman Library Technology Companion: A Basic Guide for Library Staff				
Lesson	Chapters	Pages	Assignments	Date Submitted
1	none	none	biographical essay	_____
2	1	3–14	essay	_____
3	2	15–29	short descriptions, quiz	_____
4	4–6	41–87	essay, quiz	_____
5	7–9	89–135	memo, quiz	_____
6	none	none	report (library visit)	_____
7	10–12	139–164	essay, quiz	_____
8	13–15	167–192	essay, quiz	_____
9	16–17	195–208	essay, quiz	_____
10	Two articles from the Internet		report (library visit), quiz	_____
11	none	none	report	_____
<p>It is time to make arrangements with your proctor to take the exam. (You should choose a proctor at least one month prior to scheduling the exam. This exam may be taken online if you have a proctor who has a computer with Internet access. Please note this on your <i>Proctor Information Form</i>.)</p>				

Lesson 1

Introduction and Orientation

Lesson Objectives

The purpose of this lesson is to orient you to this course.

Reading Assignment

There is no reading assignment from your textbook for this lesson.

Important Terms/Key Concepts

absolute arrangement	Melvil Dewey
card catalog	modern librarianship
classification systems	periodical index
Dewey Decimal Classification (DDC) (Dewey Decimal System)	relative arrangement
library automation	unique classification number

Lecture

The Rise of the Modern Library

Before the 1870s, relatively few books had been published and libraries were few, small, and poorly organized. Then, in the late 1800s and early 1900s, new technologies and new concepts came together to create the modern library.

Libraries in the “Old Days”

Libraries—collections of written texts—have been around as long as there has been writing. They have performed a wonderful service for humanity in preserving written materials. **Modern librarianship**, however, is a more recent development. The emergence of the modern profession and practices of librarianship is a product of the revolutionary age that followed the Civil War. That dynamic period saw the rise of modern corporations and research universities. Andrew Carnegie made his fortune in the period following the Civil War and chose to finance many public library buildings, which were known as the “Carnegie libraries.”

The Revolution in Librarianship

The extraordinary characters who founded the modern library movement in the 1870s, particularly **Melvil Dewey**, promoted revolutionary concepts and new equipment to implement them, with technologies that were the forerunners of modern **library automation**. Dewey is best remembered for devising and promoting the **Dewey Decimal Classification (DDC)**, also known as the **Dewey Decimal System**. In addition, Dewey founded the first library school in 1883 (the Columbia School of Library Economy), participated in the founding of the American Library Association and the Library Bureau, and created and edited *Library Journal*. These institutions and the journal all served to educate librarians about new and sometimes revolutionary concepts of librarianship.

I believe I understand how libraries operated before the modern library era. I worked for a small intelligence agency in the 1970s. Although we had information retrieval systems, our secret weapon was a group of “little old ladies and gentlemen” who worked in the library. Many had worked for predecessor agencies since World War II. They knew where “stuff” was. Often they would say something like, “Old Mr. Smith, who was in Major Jones’ position, kept that manual in the bottom drawer of his safe.” Unfortunately, their knowledge was lost when they retired.

- **Reorganization of the Library: Absolute Arrangement versus Relative Arrangement**

Absolute arrangement is organization by fixed locations.

Before the late nineteenth century, most libraries had books shelved in an **absolute arrangement**. Typically, a book had a call number describing its physical location, such as, “Alcove IX, Shelf 5, Book 9.” New books were shelved in the order in which they were added to the collection, not by any subject or author arrangement, but in simple order of accession. That worked well enough, since library collections were small and most were fairly static. The library catalog was usually a handwritten or printed book, listing the contents of the collection in the same order as the shelves. The catalog itself was an example of absolute arrangement, and the library could not be rearranged without making the catalog obsolete.

Relative arrangement is organizing books in relation to the books around them.

Relative arrangement was often utilized in personal libraries, where books were arranged in alphabetical order by author. In 1876, the concept of **relative arrangement** was applied by Melvil Dewey in the Dewey Decimal Classification, which revolutionized the organization of public libraries. A monumental intellectual achievement, Dewey’s system was one of the foundations of modern librarianship. Each book was assigned a **unique classification number** and could be shelved by this number in relation to the other books in the collection. Arranging books by classification numbers brought together those on the same topic. In addition, shelving books by classification numbers allowed their relative arrangement to be easily maintained even when they were shifted or new books were interfiled.

NOTE: The term “unique” here is used in the classic sense of being “the one and only”; not in the sense of “outstanding” or “special.” These examples show what I mean:

- Within each area code, each telephone number is *unique*.
- A social security account number is the *unique* identifier of a single person.

Relative arrangement was also applied to card catalogs, which were arranged alphabetically by author, title, and subject. (Hence, each book would be represented by four separate cards.) Before the development of the card catalog, handwritten or printed book catalogs were commonly used. It was very difficult to update book catalogs. Typically, the library would prepare a supplementary volume to show books added or withdrawn from the collection. In order to do an effective search, a user had to tediously consult the book catalog and all of its supplements. In contrast, it was easy to update a card catalog. New cards representing new books could be easily filed in a card catalog. Placing the individual catalog records on cards filed in relation to each other meant that cards could be added, removed, or updated freely so long as the relative arrangement was maintained. The card catalog also allowed library users to readily find the books they wanted. *Readers’ Guide* and the increasing number of specialized indexes gave library users access to the articles in the growing number of magazines. The increasing numbers of libraries, in turn, increased the demand for books, magazines, and indexes.

- **New Technology**

The revolution in librarianship required new technology, as well as new concepts. Dewey was a vigorous promoter of new equipment. He felt that founding the Library Bureau, a leader in office automation¹, was one of his most important achievements. He wrote, “I believe the Library Bureau to be the most important of the agencies (A.L.A., Journal, Bureau, and School) for advancing library interests....”² The Library Bureau manufactured and sold shelving, furniture, card file cabinets,

¹ Datz, H.R., “Equipment Then and Now,” *Library Journal*, 76(6):476-481, March 15, 1951.

² Dewey, Melvil, “The Library Bureau,” *Library Journal*, 13:145–146, May 1888.

circulation systems, and other supplies and equipment needed by libraries.³ One very important thing the Bureau did was to standardize the size of card catalog cards and to build and sell the first card catalog cases.

We now take for granted many other resources in modern libraries that are based on relatively recent technological developments. Take the *Readers' Guide to Periodical Literature*, for example. The concept of a **periodical index** is simple. In the 1800s, a number of ambitious indexing projects were undertaken. Most failed for economic reasons. Printing costs were high and there were few libraries, so there was a relatively small market. As new material was indexed, cumulative editions were needed. However, resetting the type to produce cumulative editions was very expensive. Supplements were often used.

In the 1890s, Halsey W. Wilson figured out how to print cumulative editions economically. He applied the notion of relative arrangement to printing. He realized that Linotype slugs—a single line of text created by a Linotype machine—could be interfiled just like cards in a card catalog. He interfiled newly set slugs with slugs created earlier to print cumulative publications.⁴ Wilson perfected this technique to produce the *Cumulative Book Index*, a trade catalog, and later used it to produce *Readers' Guide* and the other indexes of the H.W. Wilson Company. *Readers' Guide*, and the increasing number of specialized indexes gave library users access to articles in the growing number of magazines.

Due to developments such as the card catalog and the “invention” of the practical periodical index, information retrieval in the modern library is vastly more efficient than in the time of its predecessors. People can now locate books and articles with relative ease.

For more than one hundred years, modern libraries have thrived: bigger buildings have been built; new books, magazines, and indexes have been added; and libraries have become part of the popular culture, and play an important role in most communities and schools.

The Role of the Librarian

Librarians have many roles. Some of the most important roles are listed below.

The librarian is:

- the **manager** of a library—the building, personnel, collection, and equipment;
- an **innovator**, adopting new technology or adapting old technology;
- a **project manager**, overseeing large and small projects;
- an **educator**, teaching information literacy.

A knowledge of computers and library automation is useful to a librarian in each of these roles. Library and information technology is evolving and changing continuously. That is why I say the librarian is an innovator. At the present time, with computer technology and the Internet changing rapidly, change in libraries is accelerating.

³Several fascinating old Library Bureau catalogs are available through Google Books. Search “Library Bureau Catalog.”

⁴Lawler, John, *The H.W. Wilson Company*, Minneapolis: University of Minnesota Press, 1950, 25–26.

Library and Information Literacy

Read the following articles in *Wikipedia*. (Go to http://en.wikipedia.org/wiki/Main_Page and “search” the terms.)

- John S. Billings, http://en.wikipedia.org/wiki/John_S._Billings
- Andrew Carnegie, http://en.wikipedia.org/wiki/Andrew_Carnegie
- Charles A. Cutter, http://en.wikipedia.org/wiki/Charles_Ammi_Cutter
- Melvil Dewey, http://en.wikipedia.org/wiki/Melville_Dewey
- Dewey Decimal Classification, http://en.wikipedia.org/wiki/Dewey_Decimal_Classification
- Halsey (H.W.) Wilson, http://en.wikipedia.org/wiki/Halsey_%28H.W.%29_Wilson

Written Assignment (10 points)

Write a brief biographical essay of one page or less explaining who you are, why you are taking this course, and what you already know about computers. What do you want to learn? Are you taking this course to qualify for a certification or credential?