IS530: Information Access and Retrieval
Fall 2001, Tuesdays and Thursdays 11:10-12:25

Instructor:

Dr. Carol Tenopir
tenopir@utk.edu
Temple Court 302
Fall Office hours: Tuesdays and Thursdays 10-11 and 2-3:30; Wednesdays 10-12; 2-3; or by appointment
974-7911

Catalog Description:

Media for information storage, logical and physical information structures, query logic and languages, search strategies and heuristics, user interfaces, evaluation of retrieval system performance. Search techniques for various types of databases including multi-media, full-text, numeric, and bibliographic.

Course Goals/Objectives:

This course is part of the core curriculum, determined by the faculty to contain basic knowledge required by any information professional. It is an overview course, intended to prepare you for more specialized electives such as 531, 532, 533, 534, 535, and 566.

At the end of this course, students will be able to:

1. understand the range of media options and types of information sources and services;
2. analyze the structure and access methods of information sources and services;
3. evaluate and compare information sources of all types and in all media;
4. develop search strategies to access and retrieve information;
5. evaluate and compare methods for accessing and retrieving information;
6. be sensitive to the needs of information seekers in a variety of settings.
Methodology:

Class sessions will be a combination of lecture, individual participation, and small group work. There will be some guest speakers or tours. Much of the benefit from this class will come from the work you put into it outside of class hours. Most weeks there will be hands-on assignments and several larger assignments. Expect to spend many hours in both physical and virtual libraries.

Course Assignments: (Further details will be provided in class.)

1. LIBRARY AND RESOURCES EVALUATION (10%):

The purpose of this assignment is to introduce you to the UTK physical library, UTK virtual library, and some of the resources unique to library and information sciences. (See attached explanation.)

DUE: Tuesday, September 4

2. ACCESS METHODS FOR PRINT (15%):

Select one printed reference source found in the library from each of the following types: Directories, Almanacs, Yearbooks/Handbooks, Biographical sources, Dictionaries, Encyclopedias, Geographical sources, Bibliographies, Indexes/Abstracts, Government Documents/Statistical sources.

Examine them carefully with an emphasis on how a user can access the information within. Record the following information for each source examined:

1. Bibliographic information for the work you are examining (include as appropriate, title, author(s), edition/series/volumes, place of publication, publisher, date(s)),
2. Type of source as defined in class (encyclopedia, almanac, etc.),
3. Subject(s) covered,
4. A list of all access methods provided (for example, table of contents, subject index, author index, arrangement, headings, etc.)

Turn in: 1) a short factual section that lists the information above for each source; 2) a 700-1000 word (approximately) essay that discusses how access methods are provided in printed reference books. Use your sources as examples, but consider what these examples tell you in a larger sense. Consider the following in your discussion: does access differ depending on the type of source? What access means are similar in many print sources? What access means differ? What is a "user interface" in a printed reference source? Be prepared to discuss in class how printed reference sources of each type provide access.

NOTE: You may be examining some of these sources again for your term project, using different (but overlapping) criteria. Keep your notes!

DUE: Tuesday, September 18
3. ACCESS METHODS FOR ELECTRONIC (15%):

Select 2 different CD-ROM or online systems to compare. Remember you are selecting 2 systems, that is different search systems, not just different databases. For example, on CD-ROM you could compare SilverPlatter Windows and WILSONDISC. Online you could compare SilverPlatter Web (WebSPIRS), OCLC FirstSearch, or ProQuest Direct. To examine the 2 systems you will need to select at least one database for each. For example, you could look at PsycLIT on SilverPlatter and Applied Science and Technology on WILSONDISC. (Some systems such as LexisNexis Universe place full text resources in groupings that they do not call "databases". Consider a grouping the same as a database.) Or, if available, you could examine the same database on different systems—for example, Education Index on SilverPlatter and on WILSONDISC.

Analyze and compare their access methods and user interface according to the criteria discussed in class. Turn in: 1) A factual summary for each system, including: a) the name of the system (e.g., SilverPlatter Web); b) the system vendor (e.g., SilverPlatter); c) the database or databases (or groupings) you examined for this system (e.g., Education Index and PsycLIT); d) the producer of each database (e.g., H.W. Wilson Company and American Psychological Association); and, e) a point-by-point feature evaluation using a checklist patterned after those in your readings. 2) A 700-1000 word essay that considers how the systems compare and how they demonstrate ways electronic systems in general provide access to information.

Weave these criteria (and others you feel are important) into a checklist of features for paper #2—access methods for electronic. Each system should be evaluated with the same criteria. You may choose to assign numerical rankings, qualitative rankings (good, poor, etc.), or just use comments. In any case you will interpret them overall in the paper.

1. Overall Ease of Use:
   Include here features such as:
   b. Tutorials (available? Standalone or integrated? Right length? Well done?)
   c. Interface (or make this a separate category) (type?, appropriate level for audience?, multiple?, use of colors and spacing?, clear?, consistent?)

2. Searching (search engine)
   Include here features such as:
   a. browsing (index browsing, thesaurus browsing, document browsing, other browsing?)
   b. term selection (how are terms selected? Multiple indexes?)
   c. truncation
   d. Boolean
   e. Field searching
   f. Proximity operators
3. Output
Include here features such as:
   a. built-in features
   b. user-definable features
   c. record layout
   d. marking of items for printing, saving, or downloading
   e. sorting
   f. printing
   g. downloading

DUE: Thursday, November 13

4. ONLINE EXERCISES (20%):

Everyone will work with a partner in the class for the online exercises (if at all possible). Working with a partner helps you gain insights from another person's perspective on search strategies and is good experience for working with clients.

The 530 lab workbook contains a series of online exercises and explanatory text. Each of you must read the corresponding text of the lab assignments passed out in class before doing each lab online and plan how you will proceed online. In addition, the Walker and Janes textbook includes explanatory information that should be read before each exercise. Working with your partner, log on and complete the lab according to the workbook instructions. You will want to download most exercises in order to answer the workbook questions (in some cases you will be asked to mark answers on a printout of some pages.) After you log off, together answer the questions in the "Offline" section of the exercise. Turn in just one set of Offline answers per team for each lab.

DUE each week as you complete each lab. A suggested schedule is contained in the course schedule calendar later in this syllabus. Any changes will be announced in class.

5. TERM PROJECT (25%):
For your term project you will compile a Resources Notebook that contains summary information and evaluations of general information sources. Your Bopp & Smith textbook Part II describes many important information sources arranged by type. For this project, the class will be divided into small groups of approximately 4 students each. Each group will decide together who will be responsible for which of the Bopp & Smith titles in each chapter. Each group member will be responsible for two sources from each chapter. In Chapter 13 select sources discussed in the "Guides to Reference Sources" section. In Chapters 14-22 select sources from the "Important General Sources" section. In addition, for each of the 10 types of sources (corresponding to the 10 chapters), each group member will cover one source available on the Internet that is not in Bopp & Smith. Thus, each person will examine a total of 30 sources (20 from Bopp & Smith and 10 new Internet sources) and a group of 4 members will examine a total of 120 sources. These sources should include a mix of media—print, CD-ROM, online, and the web. You will discuss your picks for “best” sources in class.

Each group together must agree on a template for reporting the information about the sources. The template should include the items listed below. Using your template, for each source you examine, prepare a 1/2 to one page summary with the following information:

1. A bibliographic description of the source, including (as applicable): title, author(s), number of volumes, volume/edition you examined, publisher's city, publisher, date(s) of publication, URL or other identifying information for electronic sources.
2. Currency (how often this source is updated/issued.)
3. Subjects covered by this source.
4. Main intended audience(s) of this source.
5. Format (medium) of the version you examined.
6. Other formats (media) available for this title. (HINT: Use the Gale Directory of Databases to discover if there are online or CD-ROM versions of titles; various web search engines to discover if there are Internet versions; and Books in Print or Ulrich's International Guide to Periodicals to discover if there are print versions of electronic titles. All of these sources are available online on Dialog, in addition to print.)
8. Two questions (and their answers) that can be answered by this source.
9. In each category select one of the sources you examined as an especially noteworthy or important source. Indicate this by an * and a one to two sentence justification. Be
prepared to share this information in class.

Conciseness counts--limit your total information for each source to one page maximum. To encourage you not to wait until the last minute to begin this assignment, target dates for some of the chapter sections are incorporated into the course calendar.

DUE: Thursday, December 6

6. TAKE HOME FINAL EXAMINATION (10%):

Select 3 questions from LIBREF-L or Stumpers-L, two listservs for reference questions (instructions for subscribing are given later in this syllabus). Spend approximately 30 minutes trying to answer each question.

Record each source you looked at in trying to find the answer. If you find an answer, also record the answer and which source it came from. (You may send the answer to the person who posted the question, but do not send it to the entire list.) Don't forget all of the sources available to you to help you find answers--print, online, CD-ROM, Internet, etc.

For each question also write a 2-3 paragraph analysis of your strategy, including why you began with the source you did, why you changed tactics or looked at other sources, different approaches you might have taken, and why you think you found or did not find an answer.

DO NOT ask the reference staff for help! You may not be able to find answers (there may not even be an answer to some of the questions posted.) I am most interested in where you look and the process of trying to find an answer. Your grade will be based on your strategy and your analysis.

DUE: Monday, December 10, noon.

7. CLASS PARTICIPATION (5%):

Attendance at all sessions plus participation in class discussions is expected. Readings and other assignments will form the basis for discussion, although not everyone will get a chance to participate in the discussions every time. The reading list is selective; I expect you to read everything listed.

Evaluation and expectations:

- Library and Resources Evaluation, due September 4, 10%
- Online exercises, due each session as they are completed, one set per team, 20%
- Access methods for print assignment, due September 18, 15%
- Access methods for electronic assignment, due November 13, 15%
- Term Project, due December 6, 25%
- Final Examination, December 10, noon, 10%
- class participation, daily, 5%
Attendance at all classes is required. If you cannot make a session, notify me as soon as possible either via e-mail or telephone message. Although not everyone will get a chance to participate actively in every class session, participation by everyone over the semester is important and expected.

Papers are due at the beginning of class on the due date listed. If you will be late with a paper, do not compound the problem by missing class. Late papers may be penalized if they are more than 48 hours late, unless there are extenuating circumstances, preferably discussed in advance with the instructor.

Grades will be assigned according to the following scale:

- A  93-100%   Excellent
- B+  86-92%   Very Good
- B   80-85%   Good
- C+  75-79%   Marginal
- C   70-74%   Below graduate level

**Technology Skills Required and Listservs for 530:**

You need to have some basic computing and Internet skills in the first few weeks of 530. These include: searching the UTK catalog; email, telnet; access to the world wide web; subscribing to a listserv; word processing; downloading (file capture) and importing a captured file to a word processing program. All others will be taught in class.

As soon as your e-mail account is active you should subscribe to the 530 listserv. This listserv will be used for communication between 530 students and between the instructor and students. Feel free to post useful information for 530 topics on the list, and we will also discuss readings and relevant topics. To subscribe to the 530 listserv, send an email message to

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listserv@listserv.utk.edu
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Leave the subject line in the header blank; on the first line in the body of the message type `subscribe sis530 yourfirstname yourlastname`. Send the mail. Shortly you should receive a message from the listserv software welcoming you to the SIS530 list. To post messages to the list send your message to `sis530@listserv.utk.edu`. At the end of the semester quit the list by sending the following command to `listserv@listserv.utk.edu`: `signoff sis530`. For more information about listservs and list etiquette see the sis computer lab information on the sis web page: [http://www.sis.utk.edu](http://www.sis.utk.edu).

In addition, at some point in the semester you must subscribe to LIBREF-L, a listserv for reference librarians and/or STUMPERS-L, a listserv where librarians post reference questions they are having trouble answering. The final exam assumes you subscribe to one or both. To subscribe to LIBREF-L send an email message to `LISTSERV@LISTSERV.KENT.EDU` Leave the subject line blank; in the body of the message say `SUBSCRIBE LIBREF-L yourfirstname yourlastname`

To subscribe to STUMPERS-L send an email message to `MAILSERV@CUIS.EDU`
In the body of the message say SUBSCRIBE STUMPERS-L your email address

(These listservs generate lots of mail so you do not need to subscribe to them the entire semester.)

Textbooks:


IS530 Database Searching: A Laboratory Workbook for the DIALOG System. (and readings). Available at Graphic Creations, 1809 Lake Avenue.

Read all before the class session, unless otherwise noted. In addition, both texts describe many important readings. Read further as time permits. Not only will reading help you understand and do better in this class, in many of the electives it will be assumed you know the information covered in the required readings. Even if we do not have time to discuss something in class, general principles covered in the readings are important to understanding the topics covered in this class.
Course Schedule: (SUBJECT TO CHANGE)

Week 1Th: August 23

TOPICS:
Welcome; Introduction to class; requirements

Week 2T: August 28

TOPICS:
Tour of Hodges library--Meet at first floor of library

Week 2Th: August 30

TOPICS:
Overview of information access and retrieval and information services

READINGS:
Bopp & Smith, Chapters 1 and 12

Week 3T: September 4

TOPICS:
Type of reference sources

DUE:
Library and Resources Evaluation Due

Week 3Th: September 6

TOPICS:
Media options for information resources

READINGS:
WALKER & JANES, Chapter 1
Week 4T: September 11

TOPICS:
   Electronic information resources

READINGS:
   BOPP & SMITH, Chapters 5 and 6; WALKER & JANES, Chapter 2

Week 4Th: September 13

TOPICS:
   Interfaces

READINGS:
   WALKER & JANES, Chapter 4; Tenopir, Carol, "Envisioning Online Services," *Library Journal* 122 (March 1, 1997).

Week 5T: September 18

TOPICS:
   Access Methods with print
   Introduction to labs
   [Do Labs #1 and #2 after class]

READINGS:
   Before labs: 530 Lab Workbook, Chapters 1 and 2; WALKER & JANES, Chapter 3 and Chapter 6, pgs. 90-91 and 96-107.

DUE:
   Access Methods for Print paper due

Week 5Th: September 20

TOPICS:
   Relevance; recall and precision
   Record structure
   Introduction to Lab #3

READINGS:
   WALKER & JANES, Chapter 12 and Chapter 6, 96-107; 530 Lab Workbook, Chapter 3
DUE:
  Labs #1 and #2 due

  Week 6T: September 25

TOPICS:
  Boolean logic
  Introduction to Lab #4

READINGS:
  BOPP & SMITH, Chapter 5 (Boolean Logic); 530 Lab Workbook, Chapter 4

DUE:
  Lab #3 due

  Week 6Th: September 27

TOPICS:
  Finish Boolean logic
  Begin inverted files

READINGS:
  WALKER & JANES, Chapter 5, Pgs. 55-63 and Chapter 6, pgs. 91-95

DUE:
  Lab #4 due

  Week 7T: October 2

TOPICS:
  Inverted files
  Introduction to Lab #5

READINGS:
  WALKER & JANES, Chapter 5, pgs. 63-74; 530 Lab Workbook, Chapter 5

  Week 7Th: October 4

TOPICS:
  Controlled vocabulary; free text
  Introduction to Lab #6
READINGS:
BOPP & SMITH, Chapter 4; WALKER & JANES, Chapter 7 and Chapter 8, pgs. 139-151; 530 Lab Workbook, Chapter 6

DUE:
Lab #5 due

Week 8T: October 9

TOPICS:
Finish controlled vocabulary
Introduction to Lab #7

READINGS:
WALKER & JANES, Chapter 9, pgs. 177-185; 530 Lab Workbook, Chapter 7

Week 9T: October 16

TOPICS:
Aids for selecting sources
Introduction to Labs #8 and #9

READINGS:
BOPP & SMITH, Chapter 10; WALKER & JANES, Chapter 10; 530 Lab Workbook, Chapters 8 and 9

DUE:
Labs #6 and #7 due

Week 9Th: October 18

TOPICS:
Selection and Evaluation

READINGS:
OR: "Beyond 'Beyond Cool': Reviewing Web Resources," Online 23 (July/August 1999).
Week 10T: October 23

TOPICS:
Search Strategies
Introduction to Lab #10

READINGS:
BOPP & SMITH, Chapter 4 (search strategies); WALKER & JANES, Chapter 11, pgs. 247-261 and Chapter 12; 530 Lab Workbook, Chapter 10

DUE:
Labs #8 and #9 due

Week 10Th: October 25

TOPICS:
Indexes/abstracts: evaluation and strategies
Introduction to Lab #13

READINGS:
BOPP & SMITH, Chapters 20 and 21 (scan); WALKER & JANES, Chapter 8, pgs. 152-175; 530 Lab Workbook, Chapter 13

DUE:
Lab #10 due
Rough drafts of Indexes/Abstracts and Bibliographies for final project (for discussion or questions)

Week 11T: October 30

TOPICS:
Guest speaker from Elsevier Science

Week 11Th: November 1

TOPICS:
Full Text: Evaluation and Strategies
Introduction to Lab #12

READINGS:
BOPP & SMITH, Chapters 7, 15, 17, 18, and 19 (scan); WALKER & JANES, Chapter 11, pgs. 237-247; 530 Lab Workbook, Chapter 12; Tenopir, Carol, "Linking to Full Texts," Library Journal 123 (April 1, 1998): 34, 36.
DUE:
Lab #13 due
Rough drafts of encyclopedias, dictionaries, geographical sources

Week 12T: November 6

TOPICS:
Statistical and numeric sources
Directories and biographical sources

READINGS:
BOPP & SMITH, Chapter 22 (scan); BOPP & SMITH, Chapters 14 and 16 (scan); WALKER & JANES, Chapter 9, pgs. 198-202 and Chapter 11, pgs. 227-237; 530 Lab Workbook, Chapter 11

Week 12Th: November 8

TOPICS:
Hypertext

READINGS:

Week 13T: November 13

TOPICS:
Statistical Retrieval; relevance ranking
Introduction to Lab #16

READINGS:

DUE:
Lab #12 due
Access Methods for Electronic Paper
Rough drafts of almanacs, handbooks/yearbooks

Week 13Th: November 15

TOPICS:
  Finish statistical retrieval
  Review and questions for types of sources and strategies

DUE:
  Lab #16 due

Week 14T: November 20

TOPICS:
  Multimedia: Evaluation and strategies

DUE:
  Rough drafts of Directories, Biographical Sources, Government documents/
  Statistical sources
  Lab #11

Week 15T: November 27

TOPICS:
  Understanding user needs
  Introduction to Lab #14

READINGS:
  Westbrook, Lynn, "User Needs: A Synthesis and Analysis of Current Theories for
  the Practitioner." RQ (Summer 1993): 541-549; 530 Lab Workbook, Chapter 14

Week 15Th: November 29

TOPICS:
  Reference interview; intermediaries
  Introduction to Lab #15

READINGS:
  BOPP & SMITH, Chapters 3 and 9; WALKER & JANES, Chapter 13 and Chapter
  14; 530 Lab Workbook, Chapter 15.
  Taylor, Robert, "Question-Negotiation and Information Seeking in Libraries,"

DUE:
Lab #14 due

Week 16T: December 4

TOPICS:
User instruction

READINGS:
BOPP & SMITH, Chapters 8 and 11

DUE:
Lab #15 due

Week 16Th: December 6

TOPICS AND DUE:
Term Project due
Discuss it in class

Monday, December 10, noon
TAKE HOME FINAL DUE
LIBRARY AND RESOURCES EVALUATION (10%, due September 4)

Turn In: Answers to the following questions in parts 1, 2, 3, and 4. In parts 1 and 3 I am looking for your reactions, not a formal essay. Maximum of one page per part (4 pages total.)

Part 1. Complete the computer assisted tutorial "Building Library Skills" in the Hodges Library reference room. Even if you are already familiar with the library, spend some time thinking about the tutorial, arrangement, and signs in the library. Briefly answer the following questions:

--who is the intended audience of the tutorial?
--is it appropriate for this audience?
--will users learn enough from this tutorial to use the library effectively?
--how could the tutorial be improved?
--what is offered to the user when the tutorial is completed?

Part 2. Search the library's OPAC (Online Public Access Catalog) to locate the following information. Record your strategy and the answers.

a. What is the call number for Time magazine? Where are the current issues kept? Where are older issues located?
b. How many copies of the book Adam Bede does the library have? How many are checked out?
c. How many books does the library have that are written by Isaac Asimov?
d. How many books does the library have that are about Isaac Asimov?

Part 3. Think about how easy or difficult the online catalog is to use. Are instructions clear for the novice? Were you able to find what you were looking for? What problems did you encounter? Are error messages clear? (Do something intentionally wrong to find an error message if you didn't come across one inadvertently!)

Part 4. From the Library and Information Science Literature List (attached) select one source from each of the 7 sections to examine. Examine a recent issue of each, list each source you examined, and briefly answer the following questions:

1. Who is the publisher of this source and how often does it get published or updated?
2. Who is the intended audience for this source?
3. What would it be used for?
Every profession has its own unique information needs, problems, and tools. The following titles are some of the sources for library and information science that you should be familiar with. The call numbers may not be the same in every library. Check the library's catalog to be sure.

1. Reviews of the Literature and Yearbooks.
   1. *Annual Review of Information Science and Technology (ARIST)* [Z699 A1A65 yr]
   3. *World Encyclopedia of Library and Information Services* [Z1006.W67 yr]
   4. *ALA Yearbook* [Z721.A525]
   5. *Bowker Annual of Library and Book Trade Information* [Z731.A47]

2. Abstracts and Indexes.
   1. *Library Literature* [in print, online, and on CD-ROM]
   2. *Information Science Abstracts* [in print and online]
   3. *ERIC (Resources in Education and Current Journals in Education)* [in print, online, on CD-ROM, and on the World Wide Web]
   4. *Social Science Citation Index (Social SciSearch)* [in print, online and on CD-ROM]
   5. *Library and Information Science Abstracts* (LISA) [in print and online]

3. Dictionaries.

4. Encyclopedias.
   1. *ALA World Encyclopedia of Library and Information Services* [Z1006.A18]
   2. *Encyclopaedia of Librarianship* [Z1006.L3]
5. Directories.

   1. Directory of Library and Information Professionals [Z720.A4D57]

6. Core Periodicals.

   5. Information Today [full text in Trade & Industry Database on DIALOG and www.infotoday.com]
   9. Library and Information Science Research [Z669.7 L495]
   11. Library Quarterly [Z671.L713]
   12. Library Resources and Technical Services [Z671.L717]
   13. Library Trends [Z671.L84]
   15. Public Libraries [Z671.P63]
   17. Reference and User Services Quarterly (formerly RQ) [Z671.R39]
   18. InfoPro (formerly Records Management Quarterly) [HF5736.R3632]

7. Internet Lists and Web sites.


3. The Internet Public Library is a full service virtual library, including reference collections. http://www.ipl.org


5. An LIS glossary is available at http://www.sir.arizona.edu/school/glossary.html

6. Most professional societies (such as the American Society for Information Science (ASIS), the Association of Records Managers and Administrators (ARMA), the Tennessee Library Association (TLA), the Special Libraries Association (SLA), and the American Library Association (ALA) etc.) have web sites and/or listservs.

   www.asis.org
   www arma.org
   www.tnla.org
   www.sla.org
   www.ala.org (including links to the ALA divisions, such as AASL--American Association of School Librarians, ACRL--Association of College and Research Libraries, PLA--Public Library Association, ALSC--Association for Library Service to Children, and RUSA--Reference and User Services Association.)