

University of Kentucky
School of Library & Information Science (SLIS)

IS 326: Electronic Information Resources for Health Professionals

Instructor: Mr. Robert M Shapiro
Office Address: 800 Rose St. Suite M-185G
Email: shapiro.rm@uky.edu
Office Phone: (859) 323-8295
Office hours: By appointment

Course Description:

This course is a survey of electronic information resources for health professionals, including databases and Web resources, with a focus on MEDLINE. Discussion of relevant controlled vocabularies, their use in formulating and executing search strategies, and alternative interfaces to MEDLINE are addressed. The course also includes reference management software, an evidence based health care component, and discussion of systematic reviews.

Prerequisites:

There are no pre-requisites for this course.

Student Learning Outcomes:

Upon successful completion of this course, the student will:

- 1) Understand the basic principles involved in developing search strategies to retrieve citations to the biomedical literature;
- 2) Become acquainted with controlled vocabularies and how they are used to index the biomedical literature;
- 3) Become acquainted with tools utilized in health sciences information retrieval;
- 4) Become acquainted with reference management software, and be able to construct a reference library;
- 5) Develop an understanding of evidence based health care techniques and the process for conducting systematic reviews.

Course goals or objectives: This course is designed to provide a broad overview of various health sciences electronic information resources as well as controlled vocabularies used to index the biomedical literature. Students will gain hands-on experience developing and executing search strategies. Students will gain exposure to reference management software, alternative interfaces to MEDLINE, evidence based health care, and systematic reviews.

Topics to be covered:

1. Health sciences electronic information resources;
2. Controlled vocabularies;
3. Search strategy formulation and execution;

4. Reference management;
5. Evidence based health care.

Required Materials

Required Readings:

Select journal articles and web sites are indicated for each week in the Course Calendar section of the syllabus.

Required Text:

Katcher BS. *MEDLINE: A Guide to Effective Searching in PubMed & Other Interfaces*, 2nd ed. San Francisco: The Ashbury Press, 2006.

Suggested Text (not required):

Blessing JD, and Forister GL. *Introduction to Research and Medical Literature for Health Professional*, 4th ed. Burlington, MA: Jones & Bartlett Learning, 2015.

Supplemental Materials:

Handouts will be distributed throughout the course of the semester.

MEDLINE/PubMed Resource Guide

<http://www.nlm.nih.gov/bsd/pmresources.html>

Course Materials:

The primary readings for this course come from the published journal literature. I have included readings within the Course Calendar on the course syllabus. The majority of the articles are available via the Academic Search Complete database. UK Libraries subscribes to Academic Search Complete.

Access the Libraries web page at <http://libraries.uky.edu/>. Select Databases among the navigation buttons just above the middle of the page. Enter Academic Search Complete in the Title Search box. Select Academic Search Complete. You should be able to locate the articles indicated in the syllabus by using Author, Title, or combination Author/Title searches.

For those articles available from other sources, I have indicated which resource you may obtain them from. If it is a resource outside those to which UK subscribes, I have included a URL for that resource.

If you have trouble locating an article, please let me know.

We will also be reviewing relevant web sites throughout the semester. I have included URL's for these in the Course Calendar.

Some additional resources are available in the Course Content area in a folder for their respective week.

Student Evaluation:

Grading Parameters

There will be a series of 6 assignments for the course (including a midterm exam, term paper, and a summary reflection).

Course Assignment Grading

<u>Assignment</u>	<u>Points</u>	<u>Percentage</u>
Class participation	5	5%
MEDLINE Exercises	45	45%
Midterm exam	20	20%
EndNote Library	5	5%
Final exam	20	20%
Reflection paper	5	5%
Total	100	100%

Grading Scale

90% – 100% = **A (Exceptional Achievement)**

80% – 89% = **B (High Achievement)**

70% – 79% = **C (Average Achievement)**

0% – 69% = **E (Failing)**

Grading Policy

Class assignments are due on or by the due date noted on the individual assignments. The majority of the student's grade is based on the cumulative total received on individual assignments. Late assignments will only be accepted with prior approval from the instructor.

Class Participation

Throughout the course, you will participate in discussions on Canvas every week. Discussion for each week will open on Tuesdays (at 12:01AM) and close on the following Monday night at 11:59PM.

Submission of Course Assignments

Assignments should be submitted via e-mail to shapiro.rm@uky.edu as Word attachments.

Again, class assignments are due on or by the due date noted on the individual assignments. The majority of the student's grade is based on the cumulative total received on individual assignments. Late assignments will only be accepted with prior approval from the instructor.

Final Exam Information

TBD

Mid-term Grade

Mid-term grades will be posted in myUK by the deadline established in the Academic Calendar (<http://www.uky.edu/Registrar/AcademicCalendar.htm>)

Course Policies:

Submission of Assignments:

There will be a series of assignments distributed throughout the course of the semester. These assignments are based on information and resources covered in the class and readings. These assignments comprise the majority of the student's grade. Completed assignments are expected to be returned to the instructor prior to or on the date noted on the assignment. Late assignments will only be accepted with prior permission from the instructor.

Late Assignments:

Assignments should be turned in on or before the day specified. For each week an assignment is late, 10% of the grade will be subtracted. Late assignments will only be accepted with prior permission from the instructor.

Incompletes:

A grade of Incomplete due to illness or other emergencies may be arranged. A request for an Incomplete due to illness must be accompanied by a letter from your doctor, the Student Health Service, or a hospital. Lack of time to complete assigned work, or other reasons not related to unavoidable excused reasons, will not be accepted.

Academic Integrity:

Per university policy, students shall not plagiarize, cheat, or falsify or misuse academic records. Students are expected to adhere to University policy on cheating and plagiarism in all courses. The minimum penalty for a first offense is a zero on the assignment on which the offense occurred. If the offense is considered severe or the student has other academic offenses on their record, more serious penalties, up to suspension from the university may be imposed.

Plagiarism and cheating are serious breaches of academic conduct. Each student is advised to become familiar with the various forms of academic dishonesty as explained in the Code of Student Rights and Responsibilities. Complete information can be found at the following website: <http://www.uky.edu/Ombud>. A plea of ignorance is not acceptable as a defense against the charge of academic dishonesty. It is important that you review this information as all ideas borrowed from others need to be properly credited.

Part II of *Student Rights and Responsibilities* (available online <http://www.uky.edu/StudentAffairs/Code/part2.html>) states that all academic work, written or otherwise, submitted by students to their instructors or other academic supervisors, is expected to be the result of their own thought, research, or self-expression. In cases where students feel unsure about the question of plagiarism involving their own work, they are obliged to consult their instructors on the matter before submission.

When students submit work purporting to be their own, but which in any way borrows ideas, organization, wording or anything else from another source without appropriate acknowledgement of the fact, the students are guilty of plagiarism. Plagiarism includes reproducing someone else's work, whether it be a published article, chapter of a book, a paper from a friend or some file, or something similar to this. Plagiarism also includes the practice of employing or allowing another person to alter or revise the work which a student submits as his/her own, whoever that other person may be.

Students may discuss assignments among themselves or with an instructor or tutor, but when the actual work is done, it must be done by the student, and the student alone. When a student's assignment involves research in outside sources of information, the student must carefully acknowledge exactly what, where and how he/she employed them. If the words of someone else are used, the student must put quotation marks around the passage in question and add an appropriate indication of its origin. Making simple changes while leaving the organization, content and phraseology intact is plagiaristic. However, nothing in these Rules shall apply to those ideas which are so generally and freely circulated as to be a part of the public domain (Section 6.3.1).

Please note: Any assignment you turn in may be submitted to an electronic database to check for plagiarism.

Accommodations due to disability

If you have a documented disability that requires academic accommodations, please see me as soon as possible during scheduled office hours. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the Disability Resource Center (Room 2, Alumni Gym, 257-2754, email address: jkarnes@email.uky.edu) for coordination of campus disability services available to students with disabilities.

Distance Learning Students

As this is a distance learning course, students are expected to have a minimum level of technological acumen and the availability of technological resources. Students must have regular access a computer with a reliable Internet connection and audio capabilities. Internet Explorer 7 (IE) or Firefox 2.x are the recommended browsers for those using a Windows-based PC. Those using Firefox 3.x may encounter problems with assignment uploads. Those using an Apple computer with MAC OS X (10.5.x) may use Firefox 3.x or Safari 3.x.

Please be certain that your computer and/or browser allow you to view Adobe Reader documents (.pdf). Microsoft Office and other software products are free for students: <https://iweb.uky.edu/MSDownload/>.

As your instructor, I am your first go-to person for technology problems. If you need more immediate assistance, please contact TASC or UKIT.

Teaching and Academic Support (TASC)

<http://www.uky.edu/TASC/>; 859-257-8272

Information Technology Customer Service Center (UKIT)

<http://www.uky.edu/UKIT/>; 859-257-1300

Library Services

Distance Learning Services

<http://www.uky.edu/Libraries/DLLS>

Carla Cantagallo, DL Librarian

Local phone number: 859 257-0500, ext. 2171; long-distance phone number:
(800) 828-0439 (option #6)

Email: dllservice@email.uky.edu

DL Interlibrary Loan Service:

http://www.uky.edu/Libraries/libpage.php?lweb_id=253&llib_id=16

Course Reserves

http://www.uky.edu/Libraries/page.php?lweb_id=23<ab_rank=3

Distance Learning Services

<http://www.uky.edu/Libraries/DLLS>

Carla Cantagallo, DL Librarian

Local phone number: 859 257-0500, ext. 2171; long-distance phone number:
(800) 828-0439 (option #6)

Email: dllservice@email.uky.edu

DL Interlibrary Loan Service:

http://www.uky.edu/Libraries/libpage.php?lweb_id=253&llib_id=16

Course Reserves

http://www.uky.edu/Libraries/page.php?lweb_id=23<ab_rank=3

Changes

The instructor reserves the right to change or amend this syllabus at any time. In this event, proper notice will be given on the course Canvas site.

COURSE CALENDAR

Week 1

Introduction

Overview of the course

Course outline, assignments, exercises, and expectations

Text and supplemental materials

READING:

Katcher BS. Introduction. In: *MEDLINE: A Guide to Effective Searching in PubMed & Other Interfaces, 2nd ed.* San Francisco: The Ashbury Press, 2006.

Katcher BS. Chapter 1: Origins of MEDLINE and Why it Works the Way it Does. In: *MEDLINE: A Guide to Effective Searching in PubMed & Other Interfaces, 2nd ed.* San Francisco: The Ashbury Press, 2006.

National Library of Medicine. PubMed Tutorial – Introduction: PubMed Overview, What's in PubMed? Navigating PubMed.

Available at: <http://www.nlm.nih.gov/bsd/disted/pubmedtutorial/cover.html>

(You are welcome to take the Quiz at the end of this section of the PubMed Tutorial, and any others, but it will not be graded for this course; they will certainly help with the midterm though.)

National Library of Medicine. Fact Sheet: MEDLINE, PubMed, and PMC (PubMed Central): How are they different?

Available at: http://www.nlm.nih.gov/pubs/factsheets/dif_med_pub.html

MEDLINE EXERCISE 1 ASSIGNED, DUE Week 2

Week 2

Searching in MEDLINE

READING:

Katcher BS. Searching in MEDLINE. In: *MEDLINE: A Guide to Effective Searching in PubMed & Other Interfaces, 2nd ed.* San Francisco: The Ashbury Press, 2006.

National Library of Medicine. PubMed Tutorial – Building the Search: How it Works, Building Blocks, Search Tools, Search by Citation, and Search by Field.

Available at: <http://www.nlm.nih.gov/bsd/disted/pubmedtutorial/cover.html>

(Skip the section entitled “Filters.” We will cover that in Week 4.)

MEDLINE EXERCISE 1 DUE

MEDLINE EXERCISE 2 ASSIGNED, DUE Week 3

Week 3

The Medical Subject Headings (MeSH)

READING:

Katcher BS. Medical Subject Headings (MeSH). In: *MEDLINE: A Guide to Effective Searching in PubMed & Other Interfaces, 2nd ed.* San Francisco: The Ashbury Press, 2006.

National Library of Medicine. PubMed Tutorial – Understanding the Vocabulary.
Available at: <http://www.nlm.nih.gov/bsd/disted/pubmedtutorial/cover.html>

MEDLINE EXERCISE 2 DUE
MEDLINE EXERCISE 3 ASSIGNED, DUE Week 4

Week 4

Filters, and additional limiting strategies

READING:

Katcher BS. Publication Types and Other Limiting Strategies. In: *MEDLINE: A Guide to Effective Searching in PubMed & Other Interfaces, 2nd ed.* San Francisco: The Ashbury Press, 2006.

National Library of Medicine. PubMed Tutorial – Building the Search: Filters.
Available at: <http://www.nlm.nih.gov/bsd/disted/pubmedtutorial/cover.html>

MEDLINE EXERCISE 3 DUE

Week 5

Framing the question
Conducting the reference interview

READING:

Katcher BS. Framing Questions and Other Practical Tips. In: *MEDLINE: A Guide to Effective Searching in PubMed & Other Interfaces, 2nd ed.* San Francisco: The Ashbury Press, 2006.

Kluegal K, Ross CS. The Reference Interview. *Reference & User Services Quarterly*. Fall 2003, 43(1): 37-43.
Available through Academic Search Complete

MEDLINE EXERCISE 4 ASSIGNED, DUE Week 6

Week 6

Managing the results
Saving the searches
My NCBI

READING:

National Library of Medicine. PubMed Tutorial – Managing the Results.
Available at: <http://www.nlm.nih.gov/bsd/disted/pubmedtutorial/cover.html>

National Library of Medicine. PubMed Tutorial – Saving the Search.
Available at: <http://www.nlm.nih.gov/bsd/disted/pubmedtutorial/cover.html>

National Library of Medicine. PubMed Tutorial – My NCBI.
Available at: <http://www.nlm.nih.gov/bsd/disted/pubmedtutorial/cover.html>

MEDLINE EXERCISE 4 DUE
MEDLINE EXERCISE 5 ASSIGNED, DUE Week 7

Week 7

Alternative Interfaces to MEDLINE

READING:

HLWIKI International. PubMed Alternative Interfaces.
Available at: http://hlwiki.slais.ubc.ca/index.php/PubMed_Alternative_Interfaces

Bradley S, Giustini D. GoPubMed versus PubReMiner for analyzing PubMed search results: A head to head comparison of two free web “data mining” tools. 2011 CHLA/ABSC Conference, Calgary, Alberta.

Available at:
http://hlwiki.slais.ubc.ca/index.php/Bradley_S,_Giustini_D._GoPubMed_versus_PubReMiner_for_analyzing_PubMed_search_results:_a_head_to_head_comparison_of_two_free_web_%E2%80%99data_mining%E2%80%99_tools._2011_CHLA/ABSC_Conference,_Calgary,_Alberta

Conner E. PubMed Search Interface Alternatives: A Descriptive Comparison. Journal of Electronic Resources in Medical Libraries. 2010; 7(2): 126-134.
Available through UK Libraries

Review relevant web sites:

GoPubMed
<http://www.gopubmed.com/web/gopubmed/>

PubMed PubReMiner
<http://hgserver2.amc.nl/cgi-bin/miner/miner2.cgi>

MEDLINE EXERCISE 5 DUE

Week 8

Midterm exam – One week to complete
No readings

Week 9

Holiday week placeholder

Week 10

EndNote and its Alternatives

READING:

Thomson Reuters. EndNote X7 Online User Guide. (Browse and become familiar with the software before watching lecture)

Available at: <http://endnote.com/if/online-user-manual/x7>

Gall C, Brahmi FA. Retrieval comparison of EndNote to search MEDLINE (Ovid and PubMed) versus searching them directly. Medical Reference Services Quarterly. 2004 Fall; 23(3): 25-32.

Available through UK Libraries

Review relevant web sites:

Comparison of reference management software

http://en.wikipedia.org/wiki/Comparison_of_reference_management_software

Mendeley resources

<http://resources.mendeley.com/>

Zotero resources

<https://www.zotero.org/about/>

https://www.zotero.org/support/screencast_tutorials

ENDNOTE LIBRARY ASSIGNED, DUE Week 12

Week 11

Using Google and Google Scholar for health science literature

READING:

Bramer VM, Giustini D, Kramer BM, Anderson P. The comparative recall of Google Scholar versus PubMed in identical searches for biomedical systematic reviews: A review of searches used in systematic reviews. Systematic Reviews. 2013 Dec; 2:115.

Available at: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3882110/>

How to search on Google

<https://support.google.com/websearch/answer/134479?hl=en>

Google Search

http://en.wikipedia.org/wiki/Google_Search

Week 12

Complementary & Alternative Medicine on PubMed

READING:

National Center for Complementary and Alternative Medicine (NCCAM). CAM on PubMed. (Sample Searches, and Background Information)
Available at: <http://nccam.nih.gov/research/camonpubmed>

Review relevant web sites:

National Center for Complementary and Alternative Medicine (NCCAM).
<http://nccam.nih.gov/>

ENDNOTE LIBRARY DUE

Week 13

TOXNET: Toxicology Data Network

READING:

Fowler S, Schnall JG. TOXNET: Information on Toxicology and Environmental Health. American Journal of Nursing. 2014 Feb; 114(2): 61-63.
Available through UK Libraries

National Library of Medicine. Fact Sheet: TOXNET: Toxicology Data Network
Available at: <http://www.nlm.nih.gov/pubs/factsheets/toxnetfs.html>

Review relevant web sites:

Learn to Use TOXNET (NB: “Topics of Interest” on the left panel)
<http://sis.nlm.nih.gov/enviro/manuals.html>

TOXNET and Beyond: Using the National Library of Medicine Environmental Health and Toxicology Portal (Browse only)
Available at: http://sis.nlm.nih.gov/enviro/toxnet_manual.pdf

Week 14

Consumer Health Information

Household Products

READING:

MedlinePlus: Frequently Asked Questions
<http://www.nlm.nih.gov/medlineplus/faq/faq.html>

Marill JL, Miller N, Kitendaugh P. The MedlinePlus public user interface: studies of design challenges and opportunities. Journal of the Medical Library Association. 2006 Jan; 94(1): 30-40.
Available at: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1324769/>

Household Products Database: About Household Products Database

<http://hpd.nlm.nih.gov/about.htm>

Review relevant web sites:

MedlinePlus

<http://www.nlm.nih.gov/medlineplus/>

Household Products Database

<http://hpd.nlm.nih.gov/index.htm>

Week 15

Systematic Reviews

Evidence-based medicine

READING:

Grant MJ, and Both A. A typology of reviews: An analysis of 14 review types and associated methodologies. Health Information and Libraries Journal. 2009 Jun; 26(2): 91-108.

Available through UK Libraries

The Cochrane Collaboration. Evidence-based health care and systematic reviews.

Available at: <http://www.cochrane.org/about-us/evidence-based-health-care>

Moher D, Liberati A, Tetzlaff J, Altman DG, PRISMA Group. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. PLoS Med. 2009 Jun; 6(7): e1000097.

Available at: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2707599/>

Review relevant web sites:

The Cochrane Collaboration: Cochrane Reviews

<http://www.cochrane.org/cochrane-reviews>

Cochrane Handbook for Systematic Reviews of Interventions

<http://handbook.cochrane.org/>

REFLECTION PAPER ASSIGNED, DUE Week 16

Week 16

Final exam will open.