I. COURSE DESCRIPTION

A seminar-oriented introduction to online and offline health information resources, useful to both consumers and health care professionals, for understanding health promotion and disease/disorder prevention, epidemiology, diagnosis, treatment, prognostic assessment, and management. Includes allopathic and alternative/complementary/integrative information approaches, as well as genetic and evidence-based approaches and resources. Resources of the National Library of Medicine (NLM), other NIH agencies, and the Medical Library Association (MLA) are emphasized. Requirements include (1) completion of assignments involving familiarization with medical terminology and common disease management patterns, formulation of search strategies, searching various resources, and a comprehensive examination on these topics; (2) completion of an individualized health reference guide for future career use; (3) completion of one or more extensive and intensive information searches on a major disease or disorder.

II. COURSE OBJECTIVES

1. To acquire initial working knowledge of the following health topics, concepts or entities and their corresponding information resources:
   - basic medical terminology and the characteristics of major diseases and disorders, including preventive measures, etiology, epidemiology, diagnosis, treatment, and prognosis;
   - key health organization services, including those of NLM, NIH, CDC, DHHS, WHO, MLA, Cochrane, Healthfinder, and major health science center libraries.
(especially such nearby resources as Briscoe Library at UTSCSA, and the Texas Department of State Health Services Library);

- hard copy printed health reference resources (books, journals, dictionaries, encyclopedias, monographs, etc.);
- evidence-based health web sites, including those for complementary/alternative/integrative health care;
- genetic and bioinformatics information resources;
- information retrieval thesauri subject headings, search strategies, and key, related guides;
- major bibliographic databases, including MEDLINE and others.

2. To compile an individualized health reference resource guide that incorporates the kinds of information resources mentioned in the first objective (above) for future career and personal use.

3. To conduct an in-depth search or a series of searches on one or more assigned, major health problems. Examples include an idiopathic (of unknown origin) disease, or cancer, cardiovascular disease, arthritis, etc.

III. COURSE REQUIREMENTS AND GRADING

1. Completion of a comprehensive open book examination on the health resources and venues included under the first objective above (30% of course grade).

2. Completion of an individualized Health Reference Guide for future career use, including preparing for job interviews, finding information for health professionals or consumers. The Reference Guide should include the topics and sources of the kind mentioned in the first objective above (30% of grade).

3. Submission of the results of a comprehensive (extensive, intensive, long term) information search on an assigned, major category disease or disorder. The search should appropriately utilize the kinds of approaches, entities, or resources mentioned in the first course objective above: relevant terminology; organizational resources; print, online and web resources; evidence-based, complementary, and genetic sources; information retrieval aids; other bibliographic resources (30% grade).

4. Positive, constructive and proactive class participation and the sharing of insights and information with classmates (10% of grade).

IV. REQUIRED AND OPTIONAL BOOKS AND KEY WEB SITES

information searches). You should summarize its key content but we will employ both a health problem disease category approach and an information resource approach to information searching. The book is not yet available via online vendors, but must be ordered from Neal-Schuman (order form and information available via the MLA website). The cost is $75 ($67.50 for members; student membership is $40) plus shipping.


4. Previously, an Internet guidebook to health web resources was required for this course. But, given the recent availability of online web resource directories that screen for the validity of the content of listed sites, the purchase of a guidebook is not now as necessary. Instead, we will use the following web directories to health resources:

5. Additionally, we will rely heavily on such sites as the following ones:
   - [http://www.nlm.nih.gov](http://www.nlm.nih.gov), especially the National Library of Medicine’s database resources, including MedlinePlus;
   - [http://www.cochrane.org](http://www.cochrane.org), the Cochrane Library, which compiles evidence-based findings as either systematic reviews (literature meta-analysis) and results of controlled clinical trials;

V. EXAMPLES OF OTHER USEFUL SOURCES (Not required)
1. Please note the availability of various MLA books, monographs, journals, news media, bibliographic sources, etc. (see the MLA online bookstore).


VI. GUIDELINES FOR COMPLETING REQUIREMENTS

1. **Open Book Exam:** We will cover the various topics listed under the first objective in class and also in the required books and readings. The exam will test your familiarity with the services and resources of NLM and other key organizations; reference sources; the usefulness of various web sites; evidence-based approaches; genetic resources; search strategies; bibliographic databases; the potential use of electronic medical libraries; alternative/integrative medicine concepts; and general disease categories. The exam will consist of a several short-answer questions. Because the PubMed tutorial is not too clear, several dozen supplementary or alternative PubMed tutorials have been developed by libraries and individuals, and may be found by using search engines. Examples:
• See http://www.nlm.nih.gov PubMed Quick Tours on “Searching,” “MESH database” and “My NCBI.”
• http://www.library.dal.ca/kellog/guides/pubmed/
• http://healthlinks.washington.edu/howto/pubmed/
• http://galter.northwestern.edu/tutorials/pubmed/index.cfm
• http://www.library.tmc.edu/newpubmed.html
• http://www.library.health.ufl.edu/pubmed/pubmed2/

2. **Health Reference Guide**: A few medical reference operations develop their own customized guides to improve their searching capability, as do other groups or individual health information professionals. The Guide that you prepare should demonstrate broad coverage of health information resources and demonstrate a good start in organizing information resources for joint professional use and rapid searching throughout your career. The Guide may be prepared in electronic format or in a binder that accommodates standard 8½ x 11 inch photocopied papers and carefully screened, downloaded print outs. You should state the specific objectives of your Guide and include a table of contents. The organization of the Guide should sub-serve the Guide’s objectives.

Guides should be organized primarily on the basis of major disease or disorder categories, since most health professionals and consumers will present health and disease problems to you as information queries. It is recommended that you base your Guide primarily on the MedlinePlus broad groups of “Disorders and Conditions-Body Location/Systems,” etc. found at http://www.nlm.nih.gov/medlineplus/healthtopics.html. Such broad groups are compatible with MESH categories and Medline searching, and can be updated in parallel with ongoing NLM revisions. You might well annotate a minimum of 20 of the broad groupings to provide a good start for your Guide. NLM has already annotated each group (overview, anatomy/physiology, diagnosis, treatment, etc.) and you may briefly summarize such annotations.

Some of you might wish to experiment by instead using the Section/Chapter format of *The Merck Manual of Diagnosis & Therapy* as a primary basis for organizing your Guide. But the Merck categories might be less directly compatible with Medline search subject headings than the MedlinePlus group headings. Nevertheless, most physicians and many other health professionals rely on Merck manuals as basic references. In any case, alternative disease categorizations can be different from those of Western biomedicine. Oriental medicine, for example, deploys drastically different disease paradigms and different sets of diagnostic and treatment concepts based on broad sets of holistic relationships between organ systems, energy/moisture flows and environmental relationships. We will address some of these differences.
Secondary bases for organizing your Guides might be by form of literature (as used in
the Boorkman textbook); web category; evidence-based rating; integrative/alternative
headings; and by other topical concerns listed below the first course objective above.
However, when addressing a given major disease category (e.g. cancer or
cardiovascular disease), it is often useful to aggregate relevant conventional,
alternative, genetic, web, online, print, and search strategy information under that
disease category. Other ways to organize the guides might be useful. Organization is
largely a creative as well as an analytical process, and we are somewhat free to
experiment with innovative approaches to organization. A health reference guide
formatting example will be distributed. In any case, you should try to develop a
reference guide that will help you provide answers to any query within **five minutes.**

Submitted Guides will be graded on the basis of (a) your statement of each objective
and the extent to which your Guide serves stated objectives, (b) coverage of the
breadth of relevant sources, (c) the extent of which the Guide treats the various
categories of reference resources listed under the first course objective, (d) the Guide’s
apparent adequacy as a platform for expanding, adapting and revising it in the future,
and (e) the Guide’s apparent helpfulness in answering queries accurately within five
minutes.

11. **Comprehensive Information Search:** A general health problem (e.g., an idiopathic
disease) will be assigned/selected in class. Your job is to become the “class expert” on
this disease or disorder and share with us the results of your in-depth search on the
topic. This is a specialized, **in depth** exercise, rather than one of breadth (the Health
Reference Guide project above is one of breadth). You should consider various
approaches for dealing with the problem: Western biomedicine; Oriental, and other
integrative/complementary approaches; literature, database and web resources; genetic
approaches, prevention, evidence-based findings; etc. You should aim to support both
consumers and professionals in their quest for information about the disease or
problem. Searchers will be graded according to coverage of major relevant sources for
a reasonably extended time period, consideration of conventional, complementary and
genetic approaches, evidence-based assessments, and apparent usefulness to health
professionals and to consumers. Please be prepared to share your findings and insights
with the class as we progress through the semester.

**VI COURSE POLICIES**

1. A grade of Incomplete will be given only for highly exceptional circumstances
that can be documented or otherwise verified.
2. In fairness to those who complete work on time, a penalty will be assessed for late
submissions.
3. **Class breaks are not a good time to raise questions or problems** with the
instructor, since this can delay resuming the class at the end of very brief breaks.
4. **If at all possible, matters pertinent to the course should be raised during the class
so that everyone is given the same information.**
5. Please generally avoid the use of email to communicate with the instructor, aside
from simple queries. Again, it is best to raise questions in class as they occur, since others might have a similar query and because everyone should be given the same information. Often, if it is necessary to confront a problem outside of class, you may phone either instructor and leave a voice mail.

6. Because the instructor welcomes your comments about the course, one or more informal surveys will be given during the semester, in addition to the formal survey at the end of the semester. Specific comments are more useful than vague ones. You may comment to the instructors directly or indirectly at any time during the semester; comments may be oral or written and submitted anonymously.

7. If you have a good command of English, please do not hesitate to help International students (whose native language is not English and appear to be struggling) with their written assignments or other problems. If you do so, please let the instructor know so that your participation effort can be noted.

8. Please read ahead of time the assigned readings to be addressed in class. Avoiding stress becomes especially important as the semester progresses. November and April are almost always very stressful months for everyone, owing to an accumulation of assignments and other pressures.

9. Any student with a documented disability (physical or cognitive) who requires academic accommodations should contact the Services for Students with Disabilities area of the Office of the Dean of Students at 471-6259 (voice) or 471-4641 (TTY for users who are deaf or hard of hearing) as soon as possible to request an official letter outlining authorized accommodations.

VII. COURSE CALENDAR.

Tuesday

January 17
- Preview of course
- Textbook purchasing/ordering
- Health information career options/certification
- Major web sites
- The search process/terminology
- Introductions
- Please start gaining a detailed working knowledge of the MLA and NLM sites.
- Complete the PubMed Overview

January 24
- Terminology
- Overview of major web sites
- MedlinePlus/PubMed
- Discuss PubMed Overview
• Read Boorkman, “Preface” and “Brief History,” vii-xiv.
• Please start learning terminology and becoming familiar with about 10 web sites per week from the MLA Top Ten and Top 100. Complete PubMed, “Using PubMed.”

January 31
• Terminology and acquiring disease knowledge prior to search
• MLA Top 10
• MESH and other NLM Guides
• Discuss “Using PubMed”.
• Discussion of Supersearchers, pages 1-10, (Introduction)
• Complementary/alternative approaches
• Evidence-based approaches; Cochrane Library
• Read Boorkman, Chapter 1 on the reference collection.
• Please start skimming about 100 pages per week of Alternative Medicine. Become familiar enough with topics so that you can resort to them as necessary during searches.
• Complete PubMed “Working with Search Results.”.

February 7
• Read Boorkman, Chapter 2 on monographs.
• Terminology and disease background
• MedlinePlus reference sources
• Discuss PubMed “Working with Search Results.”
• Discussion of Supersearchers, pages 11-26 (Cavanaugh)
• MLA Top 100, sites 1-20
• Evidence-based approaches; Cochrane
• Genetic approaches
• Discuss Alternative Medicine, pp. 1-59.

February 14
• Read Boorkman, Chapters 3 on periodicals, and 4 on indexing, abstracting and databases
• Terminology and background
• Discuss PubMed, “Feature Tabs”
• CINHAL
• MLA Top 100, sites 21-40
• Discussion of Supersearchers, pages 27-40 (Brahmi)
• Comprehensive Guides

February 21
• Read Boorkman, Chapters 5 on US Government sources, and 6 on conferences, reviews and translations
• Comprehensive searching
• Discuss PubMed, “My NCBI”
• MLA Top 100, sites 41-60
• Web of Science
• Discussion of Supersearchers, pages 41-56 (Emmett)
• Capstone and field study options

**February 28**
• Read Boorkman, Chapters 7 terminology and 8 on handbooks and manuals
• Discuss PubMed, “Links.”
• MLA Top 100, sites 61-80
• Excerpta Medica database
• Discussion of reference guide projects
• Discussion of Supersearchers, pages 57-72 (Allen)
• Discussion of comprehensive, in-depth searches
• Complementary approaches

**March 7**
• Read Boorkman, Chapters 9 on drug information sources and 10 on consumer sources
• Read Supersearchers, pages 73-100 (Stewart and Allee)
• Discuss PubMed, “PubMed Services.”

**March 14 Spring break; no classes**
• Read Boorkman, Chapters 11 on health statistics and 12 on directories and biographies

**March 21**
• Read Boorkman, Chapters 13 on history sources and 14 on grant sources
• Discuss PubMed, “Search Field Descriptions” and “Final Review.”
• PubMed Top 100, sites 81-100
• Health reference guides
• Discussion of Supersearchers, pages 73-112 (Stewart and Allee; Eshleman)
• Other online resources, including web
• Discuss Alt. Med., pages 476-569.
• Genetic Home Reference Library
• **DUE: HEALTH REFERENCE GUIDES**

**March 28**
• Exam review
• PubMed, “Search Field Descriptions.”
• Discussion of Supersearchers, pages 113-126 (Geyer)
• Online bibliographic and web resources
• Discuss Alt. Med., pages. 570-672.
April 4
- Discussion of forthcoming exam
- Discussion of Supersearchers, pages 127-140 (Levis)
- Online bibliographic and web resources

April 11
OPEN BOOK EXAM
- Elaboration of Reference Guides
- Discussion of Supersearchers, pages 141-159 (Snow)

April 18
- Discussion of Exam answers
- Comprehensive searches
- Tentative: Visit to Spring Open House at Academy of Oriental Medicine, 2700 West Anderson Lane. Exact dates and times to be announced.

April 25
- Discussion comprehensive searches
- Course survey

May 2 Last class
- DUE: COMPREHENSIVE SEARCH REPORT.