Information Retrieval and Web Search

Xiannong Meng
Computer Science Department
Bucknell University
Lewisburg, PA 17837
U.S.A.

Instructor: Xiannong Meng, `http://www.eg.bucknell.edu/~xmeng/`

Email: `xmeng@bucknell.edu  xmeng@bucknell.edu`

Textbooks: Main textbook

1. *Search Engines – Information Retrieval in Practice* by W. Bruce Croft, Don Metzler, and Trevor Strohman, Addison Wesley 2010.
   `http://www.search-engines-book.com`

References: Here is a list of other reference books used in the lectures.

1. *Introduction to Information Retrieval* by Christopher
2. *Modern Information Retrieval*, by Ricardo Baeza-Yates and Berthier Ribeiro-Neto, Addison-Wesley, 1999.
   `http://www.sims.berkeley.edu/~hearst/irbook/`
3. On-line book: *Information Retrieval*, by van Rijsbergen, 1979.
   `http://www.dcs.gla.ac.uk/Keith/Preface.html` D. Manning, Prabhakar Raghavan and Hinrich Schtze, Cambridge University Press. 2008.
   `http://www-csli.stanford.edu/~hinrich/information-retrieval-book.html`
4. *Building an Intelligent Web: Theory and Practice* by Rajendra Akerkar and Pawan Lingras, Jones and Bartlett Publishers, 2008
   `http://www.jbpub.com/catalog/9780763741372/`
5. *Automatic Text Processing* by Gerard Salton, Addison-Wesley, 1989.
6. *Finding Out About: A Cognitive Perspective on Search Engine Technology and the WWW*, by Richard K. Below, Cambridge University Press, 2001.
7. *Internet Agents: Spiders, Wanders, Brokers, and Bots*, by Fah-Chun Cheong, New Riders Publishers, 1996.
8. *Data Mining: Concepts and Techniques*, by Jiawei Han and Micheline Kamber, Morgan Kaufmann, 2001.
9. *Data Mining Methods for Knowledge Discovery*, by Krzysztof Cios, Witold Pedrycz, Roman Swiniarski, Kluwer, 1998.
10. *Information Storage and Retrieval*, by Robert R. Korfhage, John Wiley & Sons, 1997

Expected Background: Students are expected to have the background of basic data structures and algorithm design, and sufficient programming experiences in Java or C++.

Course Topics: Information retrieval models, evaluations, query languages, query operations, text properties and operations, indexing and searching, user interface, and Web search application.

Course Format: The course consists of lectures and programming projects. See separate document for the projects.

Relevant Courses at Other Universities: Here is a partial list of information retrieval and web search courses at various universities.
`http://localhost:9999/webpages/webir-teaching-sites.html`