

THE ISLAMIA UNIVERSITY OF BAHAWALPUR

Department of Library and Information Science

Online Information Retrieval (LISC-43203)

PhD—2nd semester

Class days: according to time-table

Instructor: Dr. Muhammad Younus

Class timing: according to time-table

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Course objective

This course will cover introduction of information retrieval, features, elements, functions, components, kinds and purpose of an information retrieval system, interactive process in human information seeking and searching, abstracting and indexing services (DIALOG, ERIC, EBSCO, Medline, OCLC), controlled vocabulary vs. natural language, authority control, Boolean operators, stop words, truncation, phrase search, word proximity, parsing rules, reserved words, punctuation, prefix/suffix field, fuzzy logic, search strategy, evaluation of search results (relevance, judgment, recall and precision), Web search engines, Meta search, selection and evaluation of online subscription databases, and future of online information retrieval.

Teaching methodology

1. The class will be conducted in a lecture & discussion environment where the class tutor will lead the discussion, and students will be motivated to take part as the active learners and raise questions at the end of each class session.
2. Students will be expected to give their presentations.
3. Students will be expected to read prescribed books and assignments in advance. This will be tested through a quiz, which may proceed each class session.

Exams

There will be exams in accordance with the university schedule. All university policies, procedures and the highest moral/ethical standards will be observed.

Course Contents

Topic 1

Introduction to information retrieval

Concepts, features, elements, functions, components, kinds and purpose of an information retrieval system

Topic 2

Search engines and their types

Topic 3

Controlled vocabulary vs. natural language and authority control

Session 4

Boolean searching techniques

Topic 5

Stop words and phrase searching

Topic 6

Proximity search

Topic 7

Use of punctuations and symbols in searching

Topic 8

Truncation & wild card

Topic 9

Use of prefix and suffix

Topic 10

Social information retrieval

Topic 11

Indexing and abstracting services
(i.e. DIALOG, ERIC, EBSCO, Medline, OCLC)

Topic 12

Evaluation of information retrieval system

Recommended readings

1. Croft, W.B., Metzler, D., and Strohman, T. (2009). Information retrieval in practice. New Jersey: Pearson Education.
2. Manning, C.D., Raghavan, P., and Schutze, H. (2008). Introduction to information retrieval. New York: Cambridge University Press.
3. Langville, A.N. and Meyer, C.D. (2006). Google's PageRank and beyond: the science of search engine rankings. New Jersey: Princeton University Press.
4. Grossman, D.A. and Frieder, O. (2004). Information retrieval: algorithms and heuristics. Dordrecht: Springer.
5. Croft, W.B. and Lafferty, J. (2003). Language modeling for information retrieval. Dordrecht: Kluwer Academic Publishers.
6. Chowdhury, G.G. (2010). Introduction to modern information retrieval. 3rd edition. London: Facet Publishing.

7. Baldi, P., Frasconi, P. and Smyth, P. (2003). Modeling the Internet and the Web: probabilistic methods and algorithms. Chichester: Wiley.
8. Chakrabarti, Soumen. (2003). Mining the Web: discovering knowledge from hypertext data. The Morgan Kaufman Series in Data Management Systems. Elsevier Science and Technology.
9. Kowalski, G. and Maybury, M. T. (2000). Information storage and retrieval systems: theory and implementation. Boston: Kluwer Academic.
10. Sparck, J. K. and Willet, P. (1997). Readings in information retrieval. San Francisco, Calif: Morgan Kaufman.