

# Information Retrieval Syllabus (for M.Sc. Students)

*Assist. Prof. Dr. Khawla Hussein Ali*

- ♣ Lecture 01: Introduction to Information Retrieval (1 week)
- ♣ Lecture 02: Boolean Retrieval and Term Indexing (1 week)
- ♣ Lecture 03: Data Structures in IR and Tolerant Retrieval (1 week)
- ♣ Lecture 04: Term Weighting and Vector Space Model (2 weeks)
- ♣ Lecture 05: Probabilistic Information Retrieval (1 week)
- ♣ Lecture 06: Language Modelling for Information Retrieval (1 week)
- ♣ Lecture 07: Relevance Feedback and Query Expansion (2 weeks)
- ♣ Lecture 08: Latent and Semantic Information Retrieval Models (2 weeks)
- ♣ Lecture 09: Classification, Clustering, learning to Rank, Evaluation (2 weeks)
- ♣ Project coaching.
- ♣ Lecture 10: Web Search and Link Analysis (2 weeks)
- ♣ Project presentations.

## Text Books

- ♣ C. D. Manning, P. Raghavan and H. Schütze, Introduction to Information Retrieval, Cambridge University Press, 2008 (available at <http://nlp.stanford.edu/IR-book>).
- ♣ B. Croft, D. Metzler, T. Strohman, Search Engines: Information Retrieval in Practice, Addison-Wesley, 2009 (available at <http://ciir.cs.umass.edu/irbook/>).
- ♣ R. Baeza-Yates, B. Ribeiro-Neto, Modern Information Retrieval, Addison-Wesley, 2011 (2nd Edition)