

## CS 825 Information Retrieval (3, 0)

**Pre-requisite:** None

**Recommended Books:**

1. Learning to Rank for Information Retrieval, Tie-Yan Liu, Springer Berlin Heidelberg, 2014.
2. Multilingual Information Retrieval: From Research To Practice, Carol Peters, Martin Braschler, Paul Clough, Springer, 2012.
3. Modern Information Retrieval. Baeza-Yates Ricardo and Berthier Ribeiro-Neto. 2nd edition, Addison-Wesley, 2011.

**Credit Hours:** 3 (3, 0)

**Course Objectives:**

- Introduce the concepts underlying technologies of modern information retrieval systems.
- To study theoretical aspects as well as implementation issues of classical and modern retrieval problems such as search engines.
- Basic and advanced techniques for building text-based information systems

<b>Topics / Contents</b>	<b>Allocated Periods</b>
This course provides a variety of basic principles, techniques and modern advances for searching, managing, and mining information. It will cover algorithms, design, and implementation of modern information retrieval systems. The topics include: Search engine	<b>45</b>
architecture, Retrieval models, Retrieval evaluation, Relevance feedback, Link analysis, Search applications, Retrieval system design and implementation, text analysis techniques, retrieval models (e.g., Boolean, vector space, probabilistic, and learning-based methods), search evaluation, retrieval feedback, search log mining, and applications in web information management. IR techniques for the web, including crawling, link-based algorithms, and metadata usage are also discussed	