

# CSM69 - Information Retrieval

Exam Prep

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# This module

- 15 classes (plus this)
  - 1 intro
  - 1 on history of IR
  - 3 on IR systems
  - 1 on IIR styles
  - 2 on IS
  - 2 on evaluation
  - 1 on search UIs
  - 1 on web search
  - 1 on multimedia search
  - 1 on collaborative search
  - 1 on exploratory search

# This module

- 1 Textbook - covered (nearly) every chapter)
- 2 courseworks
  - 1 on building IR systems
  - 1 on evaluating Search UI design

# IR Systems

- How to build an index + structure of an index
- Access Paradigms (inc. Vector Space Model)
- TFXIDF (inc. limitations)
- Log Rule
- Precision & Recall
- Synonyms and Polysemy

# IR Systems

- Cranfield / TREC Competitions
- Term & Document Weights
- PageRank
- Latent Semantic Indexing
- Multimedia Systems - Content-based retrieval

# Information Seeking

- Knowledge gaps and information needs
- Dimensions of IS
- Contexts of IS
- IS Linear Process models
- IS Non-Linear Process models
- Cognitive Models

# Information Seeking

- Models of Users
- Dialogue Models
- Models of Tasks and Strategies
- Lots of UIs + Design Principles
- Evaluation methods (inc. exploratory goals)

# Search User Interfaces

- Relevance Feedback & Query Expansion
- Some HCI Principles
- 4 part taxonomy
- Many examples

# Evaluation

- Average Precision & MAP
- Precision & Recall Graphs
- Discounted Cumulative Gain
- Coverage & Novelty
- User studies - and task choice

# Exploratory Search

- Exploratory Goals/Needs
- Example Exploratory Scenarios (and attributes)
- Sensemaking + Learning
- Exploratory Process Models
- Papers evaluating Exploratory Search
- HCIR

# Collaborative and Social Search

- Roots of collaboration
- Survey of real collaborative IS
- Dimensions of Collaborative IS support
- Example UIs and their support
- Other models of Collaboration and Social Interaction
- Collaborative Sensemaking + Perception

# Example Exam Questions

General Guide to “Level” for each question:

40%: Narrow fail. Student demonstrates basic knowledge with no insight.

50%: Bare pass. Basic knowledge and limited insight; an ability to reproduce ideas without relating them to the issue at hand.

60%: Average pass. Some advanced knowledge, limited application of key concepts to the question

70%: Strong pass. Some advanced knowledge, key concepts applied well to the question.

80%: Clear distinction: Advanced knowledge applied to the question together with key concepts.

90%: High distinction: Advanced knowledge and related literature combined with key concepts.