LIS5263 – Theory of Information Retrieval

TERM 20XX, COURSE MEETING DAY/TIME, COURSE MEETING LOCATION

Mode of Instruction: Online

Students all meet with instructor for class weekly, synchronously, using a multi-media conferencing system such as Collaborate, at a specific class time indicated in the University's course schedule for each semester. Additional asynchronous interactions among students and with instructor (e.g., participation in discussion forums, etc.) may also be required, as indicated in course evaluation and assessments, to complete the course.

Instructor:
Email:
Office:
Phone:
Course Location/Website:
Office Hours (in office, online or via phone):
Teaching Assistant:
Email:

PREREQUISITE: LIS5703 or instructor permission

COURSE DESCRIPTION:

This course will introduce students to theories, models, and systems of information retrieval (IR). These will include the models of representation for data/information/knowledge and user needs/queries; the models and mechanisms of information relevance establishment, information filtering and personalization; and the models and measures for IR system performance evaluation.

COURSE OBJECTIVES:

Upon completion of this course students will

1. discuss the major milestones of historical development of IR systems and understand their implications to IR research and practice

2. explain the major theories and algorithms 'powering' the modern search engines

3. discuss the models and methodologies of IR system evaluation, and the applications and limitations of current IR performance measures and other proposed performance measures

4. describe Semantic Web technologies and their use in IR

5. discuss some of the social issues associated with the practical implementations of the IR models

6. describe the techniques and strategies used to optimize websites for search engines

COURSE MATERIALS:

There is NO required textbook for this course. All readings will be served from the learning management system (LMS) site of the course.

COURSE ASSIGNMENTS AND EVALUATION:

Reading: All readings will be linked to the schedule and be accessible to students through the LMS site of the course. Students are expected to read **_all_** required readings for each week.

Discussion: Students are expected to participate in the Discussion Boards (DBs) by posting comments on the required readings for that week. The goal of the Discussion Board participations is for the student to give the instructor their immediate feedback to the assigned readings and the materials covered in class. Students need to demonstrate that they have done the assigned readings by providing thoughtful comments and critical analysis of the theories and approaches/techniques discussed in the readings. Students may be given discussion questions small exercises, or quizzes to motivate discussions, to help with better understanding of the course materials, and/or prepare for take home practice questions sets.

Assignments: Two assignments are given throughout the semester to develop a deeper and broader understanding of a particular part of the IR theory and/or the inner-working of a particular IR system in a broad sense.

The assignments will be in the form of 2 topical essays (1100-1200 words) submitted through the Assignments module. The more detailed descriptions and guidelines for writing the essays are available from the Assignments module.

Take home practice questions sets: There will be two 24 hour take home practice set. The instructions for them will be posted in the assignments module of the course LMS site.

GRADE CALCULATION:

Throughout the course you can earn up to 100 points divided as follows:

1. Participation in weekly discussions, 15 points:
   a. Attending the chat of Week 1 (REQUIRED); participating in the chat and discussion, posting a bio – up to 2 points
   b. Participating in the chats and discussions of Weeks 2-14; completing practice exercises

(if any) (13 weeks) – up to 13 points

2. Short papers 40 points (20 points each)

3. Take home practice questions set 1: 20 points

4. Take home practice questions set 2: 25 points

GRADING SCALE:

A	93 - 100	C	73 – 76
A-	90 – 92	C-	70 – 72
B+	87 – 89	D+	67 – 69
B	83 – 86	D	63 – 66
B-	80 – 82	D-	60 – 62
C+	77 – 79	F	0 – 59

COURSE SCHEDULE:

WEEK	TOPICS TO BE COVERED
1	Intro. to IR and IR history
2	Classic IR models: Boolean Model
3	Classic IR models: Vector Space Model
4	Text processing/Natural language processing
5	Evaluation measures and relevance
6	Relevance feedback
7	Social networks
8	Web search engines
9	Link analysis and social search
10	Multimedia IR
11	Semantic web technologies and standards
12	Digital libraries
13	Scientific information systems
14	Future of IR and wrap-up
15	The last day of classes

UNIVERSITY POLICIES:

ATTENDANCE POLICY

Excused absences include documented illness, deaths in the family and other documented crises, call to active military duty or jury duty, religious holy days, and official University activities. These absences

will be accommodated in a way that does not arbitrarily penalize students who have a valid excuse. Consideration will also be given to students whose dependent children experience serious illness.

ACADEMIC HONOR POLICY

The Florida State University Academic Honor Policy outlines the University's expectations for the integrity of students' academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process. Students are responsible for reading the Academic Honor Policy and for living up to their pledge to "...be honest and truthful and... [to] strive for personal and institutional integrity at Florida State University." (Florida State University Academic Honor Policy, found at http://fda.fsu.edu/academic-resources/academic-integrity-and-grievances/academic-honor-policy)

AMERICANS WITH DISABILITIES ACT

Students with disabilities needing academic accommodation should:

(1) register with and provide documentation to the Student Disability Resource Center; and

(2) bring a letter to the instructor indicating the need for accommodation and what type.

Please note that instructors are not allowed to provide classroom accommodation to a student until appropriate verification from the Student Disability Resource Center has been provided.

This syllabus and other class materials are available in alternative format upon request.

For more information about services available to FSU students with disabilities, contact the:

Student Disability Resource Center
874 Traditions Way
108 Student Services Building
Florida State University
Tallahassee, FL 32306-4167
(850) 644-9566 (voice)
(850) 644-8504 (TDD)
sdrc@admin.fsu.edu
http://www.disabilitycenter.fsu.edu/

SYLLABUS CHANGE POLICY

"Except for changes that substantially affect implementation of the evaluation (grading) statement, this syllabus is a guide for the course and is subject to change with advance notice."

SCHOOL OR DISCIPLINARY POLICIES:

COPYRIGHT STATEMENT

Some of the materials in this course are possibly copyrighted. They are intended for use only by students registered and enrolled in this course and only for instructional activities associated with, and for the duration of, the course. They may not be retained in another medium or disseminated further.

They are provided in compliance with the provisions of the *Technology, Education, And Copyright Harmonization* (TEACH) Act (refer to the 3/7/2001 TEACH Act at www.copyright.gov/legislation/archive/).

SCHOOL OF INFORMATION HARDWARE AND SOFTWARE REQUIREMENTS

A list of all hardware and software requirements for students participating in the School of Information courses can be found at the following location: http://ischool.cci.fsu.edu/academics/online/requirements/

STUDENT ELIGIBILITY FOR AN INCOMPLETE GRADE

Incomplete ("I") grades will not be assigned, except in the case of exceptional unforeseen circumstances that occur within the last three weeks of the semester and your work has otherwise been satisfactory (C average).