

Syllabus

Search Engine Development - COMP 475

3:00 – 4:15 TR Science 206

Spring 2009

Instructor: Dr. Frank McCown
Contact: 501-279-4826, HU Box 10764, fmccown@harding.edu
Home Page: <http://www.harding.edu/fmccown/classes/comp475-s09/> (Syllabus, useful links)
Office Hours: Science 208: 11 – 12 and 2 – 5 MW, 4:30 – 5 TR, 11 – 12 F or by appointment

Course Description

This purpose of this class is understand the how the Web is organized, understand the characteristics and limitations of web search, develop several of the components to implement a web search engine, and make a significant contribution to an open source search engine project. Prerequisite: COMP 245 and 250.

Required textbook: [An Introduction to Search Engines and Web Navigation](#) by Mark Levene (2005)

Online textbook : [An introduction to information retrieval](#) by Manning, Raghavan, and Schütze (2008)

Optional textbook: [Google's PageRank and Beyond: The Science of Search Engine Rankings](#) by Langville and Meyer (2006)

Exams

Two regular exams (each worth 100 points) will be given in class as well as a final comprehensive exam (150 points) covering the entire course and, in more detail, the information presented since the 2nd exam. If you are unable to take an exam as scheduled due to a serious illness or some other emergency, it is **your responsibility** to call me and leave a message **before** the exam or as soon as you are physically able. If an official school function takes you out of class on an exam date, it is your responsibility to make arrangements *one week prior* to the exam as to when you will take the exam. Usually it will be given early, not late.

Programming Projects

There will be a variety of programming projects to be completed, usually in Java. All source code should conform to “McCown’s Tips to Writing Clean Code” (a separate hand-out). You may work independently on all programs or in pairs (two people only) when permitted. Pair programming has been shown to have a number of benefits including increased personal satisfaction and fewer errors¹. If you work in pairs, both of you must work together on a *single* computer, and both of you must write *approximately half* of the code. **No code can be written without the other partner present and watching.** Both of you should understand completely what is being written since you will have to complete your exams individually. When you submit a program that has been written in pairs, you must include a printed log listing the dates and times you and your partner met to write the program. If you fail to provide a log or turn in a program that is nearly identical as someone else’s will be considered cheating.

Quizzes and Homework Assignments

Quizzes over reading assignments will be worth 10 points each. All quizzes will be taken on Blackboard at <http://elarning.harding.edu> before the class period on which the quiz is due. The quizzes are open book, but you may not discuss any quiz questions with anyone before or during the quiz. Even if you are absent from class, you are still required to take the quiz.

Ten point homework assignments will be given as homework and averaged into the quiz scores. All 10 point homework assignment need to be completed *individually*.

¹ See *All I Really Need to Know about Pair Programming I Learned in Kindergarten* (2000) for more information on effectively using pair programming at <http://citeseer.ist.psu.edu/williams00all.html>.

Extra Credit

You will receive **0.1%** points extra credit added to your final grade for each Computer Seminar that you attend. Seminar meets every Friday at 7:05 am in Science 113. The first seminar will begin around the 3rd week of the semester. There will be approximately 11 seminars, thus allowing you to increase your final grade by 1.1%. See <http://www.harding.edu/comp/calendar.html> for the complete schedule.

The McChallenge: 1% will be added to your final grade for the completion of a program which will be made available to you later in the semester. The program will be due the Friday before final exams. You can skip the program and still get the 1% added to your final grade if you beat me in a game of basketball, tennis, racquetball, Halo, chess, Trivia Pursuit, or any other sport/game that I know how to play. If you lose, you've still got to write the program to get your 1%. Only one challenge per semester. Come by my office to schedule a time to play.

Grades

Standard letter grades: A = 90-100%, B = 80-89% C = 70-79%, D = 60-69%, F = 0-59%

Final grades will be computed as follows:

Exams:	30%
Projects:	30%
Quizzes and Assignments:	20%
Final Exam:	20%

Important! Keep all of your programs, homework, etc. so if I marked your grade down incorrectly, the problem will be easily resolved. Everything I hand back to you will also be very beneficial when studying for the final.

Late work: A maximum of 10% will be taken off *each day* (not each class period) a program or assignment is late, up to 50%. Every day is counted, including weekends. Nothing late more than 1 week will be accepted.

Assessment

Harding University, since its charter in 1924, has been strongly committed to providing the best resources and environment for the teaching-learning process. The board, administration, faculty, and staff are wholeheartedly committed to full compliance with all criteria of the Higher Learning Commission of the North Central Association of Colleges and Schools. The university values continuous, rigorous assessment at every level for its potential to improve student learning and achievement and for its centrality in fulfilling the stated mission of Harding. Thus, a comprehensive assessment program has been developed that includes both the Academic units and the Administrative and Educational Support (AES) units. Specifically, all academic units will be assessed in reference to the following Expanded Statement of Institutional Purpose: **The University provides programs that enable students to acquire essential knowledge, skills, and dispositions in their academic disciplines for successful careers, advanced studies, and servant leadership.** Assessment of the knowledge, skills, and dispositions of each student for the purpose of assigning a letter grade at the completion of this course will be based on the projects, quizzes, homework assignments, and exams that were described previously in this syllabus.

Expectations

1. It is important that you **check your e-mail regularly (everyday)** because I occasionally give hints or corrections to homework assignments via e-mail. This is also the best way to communicate with the class outside of the classroom.
2. I expect every one of you to hold to the **highest standard** of personal conduct and **integrity**... that means you will not cheat on tests or programs. Cheating may result in you being dropped from the class with an F. That doesn't mean you can't help others with their programs; everyone will at some time struggle and need assistance from fellow students. But simply giving someone your source code to copy isn't going to help either of you. **Warning:** Students who "work together" (write one program and each make a copy) on a homework or lab are in danger of having one grade divided between them. Homework and labs are **individual assignments** and are the responsibility of the individual. Only the projects can be written in pairs. Come by during office hours (or we'll arrange a time) for assistance on programs. Also take advantage of the tutor who will be available several times a week.
3. I expect you to adhere to the **dress code** as spelled out in the Student Handbook. This includes (men) removing caps while in class.
4. There is **no food or drink** prohibited in the lab. This is expensive equipment and carpeting that is easily spoiled by an accident.

5. Silence your cell phones.

If you ever need assistance in this class or anything else, please don't hesitate to come by my office or give me a call.

Students with Disabilities

It is the policy for Harding University to accommodate students with disabilities, pursuant to federal and state law. Therefore, any student with a *documented disability* condition (e.g. physical, learning, psychological, vision, hearing, etc.) who needs to arrange reasonable accommodations, must contact the instructor and the Disabilities Office at the *beginning* of each semester. (If the diagnosis of the disability occurs during the academic year, the student must self-identify with the Disabilities Director *as soon as possible* in order to get academic accommodations in place for the remainder of the semester.) The Disabilities Office is located in Room 102 of the Lee Academic Center, telephone, (501) 279-4019.



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