

COURSE SYLLABUS

Unique#	Day & Time	Bldg & Room	Final Examination Date & Time
54910	MW 4:00-5:30 pm	BUR 212	To Be Announced in Class

	Instructor	Teaching Assistant
Name:	Dr. Greg Lavender	Mr. Vishwas Srinivasan
Office/Hours:	Painter 5.72B / MW 2:00-3:30 pm	ESB 229 Desk #2 / TTh 2:00-3:00 pm
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Newsgroup:	utexas.class.cs321h-lavender	
Website:	http://www.cs.utexas.edu/~lavender/courses/cs321h	

Course Objective: This is a course on programming using the functional/applicative style. Functional programming is sometimes considered esoteric by mainstream software engineers, but there are important insights and advanced programming techniques to be learned from functional programming that will make you a better software engineer, even if you never program in a functional language after this course. This course brings together many of the concepts and technical skills that you have learned in your other courses up to this point in your studies. The emphasis will be on using powerful higher-order programming constructs and some advanced control structures to do “power programming.” You will also learn how to design and implement Read-Eval-Print-Loop interpreters using a powerful technique called monadic parsing. Functional programming languages to be studied include Haskell (a pure functional language) and Scheme (a dialect of LISP).

Prerequisites: The following courses, or their equivalents, with a grade of at least C are **required** prerequisites: CS310(H), CS336(H), CS337(H), and M408D or M408M. CS337(H) may be taken concurrently. If you have not taken these courses, or have equivalent credit, you may be dropped from this course. Please see a CS Department advisor if you do not satisfy the prerequisites. If you have taken this course before, you must have departmental permission to take it again.

Textbooks: There is no official textbook for this course. Papers and online documents available from various websites or will be handed out in class will be assigned as reading. Here are some useful functional programming websites:

http://en.wikipedia.org/wiki/Functional_programming
<http://www.haskell.org>
<http://www.scheme.com/tspl3>
<http://www.schemers.org>
<http://www.drscheme.org>

Lectures: It is to your advantage to attend every lecture. Lecture notes are handed out at the beginning of each class. Electronic copies of the lecture notes are placed on the course web page by the end of each class day. It is your responsibility to keep up with the course lecture material by attending each class.

Office Hours: Office hours will be held as stated above unless otherwise announced in class or posted to the course newsgroup. You may also request an appointment in person, by telephone, or via e-mail.

Email/Newsgroup: Feel free to send questions via email to the instructor or TA, or better yet, post them to the class newsgroup. Either the instructor or the TA will respond as soon as possible. Any questions that we receive via email that will benefit the entire class will be posted anonymously to the newsgroup, along with any comments deemed helpful. Flames and abusive mail will not be answered and may be posted to the newsgroup along with the sender’s name.

Homework: Homework assignments will consist of assigned readings and problem sets that will be assigned regularly. Homework will be graded by the TA. A class newsgroup has been created for general discussion about homework assignments, but you are to do all homework assignments on your own unless otherwise stated in the assignment.

Programs: One of the goals of this course is to gain basic familiarity with different functional programming language concepts and their manifestation in functional languages. To achieve this goal, there will programming assignments in at least two different functional languages. **You are to work on the programming assignments on your own, without assistance from classmates, other people, or resources other than documentation of language features in books or online tutorials. Using Internet search engines to search for solutions to assignments is expressly forbidden.** It is assumed that you have access to a departmental or personal UNIX™, Linux, MacOS™ X or Windows™ computer system for programming. Language systems used in this course are available on multiple platforms. Information for how to obtain language systems will be provided in class.

Exams: There will be a **mid-term examination and a comprehensive final examination** according to the following schedule. The exams will be based upon material from the lectures, assigned readings, homework assignments, and programming assignments. **Questions regarding the grading of the midterm exam must be submitted in writing within two days after the exam is returned in class.**

Mid-Term Exam	Wednesday, 7 March, 7-10pm, GEO 2.102. Material covered up to this date.
Final Exam	To Be Announced in Class. Comprehensive.

Grading: **Each exam counts 25%, programs collectively count 30%, homework collectively counts 15%, and class attendance and participation collectively counts 5%.** The final grade is calculated on a standard academic grading scale: **A: 90-100, B: 80-89, C: 70-79, D: 60-69, F: 0-59.** The instructor reserves the right to set the lower-bound for each grade scale in a consistent manner, but you are guaranteed that the lower bound will not increase. **For example:** an 90 final course average guarantees a grade of A, but a 89.49 final course average may not qualify for a grade of A. However, if 89.49 qualifies you for an A, then 79.49 qualifies for a B, 69.49 qualifies for a C, and 59.49 qualifies for a D.

Important Dates: All important semester dates are posted at <http://www.utexas.edu/student/registrar/06-07long.html>

Code of Conduct: See <http://www.cs.utexas.edu/users/ear/CodeOfConduct.html>. Students that violate University rules on academic honesty are subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from the University. Academic dishonesty harms all students and the integrity of the University. Policies on academic dishonesty will be strictly enforced.

Extenuating Circumstances: If you have difficulty meeting the requirements of this course because of extenuating personal circumstances, you are to notify the course instructor at the *earliest possible date* so that your unique situation can be discussed in confidence. If you encounter an unexpected medical or family emergency, or a random act of Nature, that will cause you to unexpectedly miss a class assignment or exam, you must notify the instructor at the earliest possible date in order to qualify for any possible special consideration.