

CS435 FUNCTIONAL LANGUAGE AND PARSING

PREREQUISITES: CS102-Computing and Algorithms II

INSTRUCTOR : Dr. Saroja Kanchi

BOOKS : “Haskell – The craft of Functional Programming” Simon Thompson, Addison Wesley Publishing

OFFICE AND PHONE:Room AB 2-300L , 762-7987

OFFICE HOURS: TBD and anytime I am in my office

EMAIL: skanchi@kettering.edu. DO NOT use email to ask for lecture material to be covered when you miss a class. Email is to be used any clarifications. If you miss a class, talk to one of your classmates for missed material.

DROP DATE: You may withdraw from the course with no grade assigned to the course up to Friday of Week 7.

BLACKBOARD USAGE: We will be using blackboard for posting lecture notes and for making announcements. If there is an important update, I will send out emails to you asking you to check the blackboard. However, there may be several announcements made in class, that may not appear on the blackboard. Checking blackboard is not a replacement for attending classes

CONTENT DESCRIPTION: Introduction to contemporary functional programming languages and techniques: lists, first class and higher order functions, lazy evaluation, and infinite data structures. Introduction to context free languages and parsing techniques: LL(k), LR(k). Construction of hand written parsers and use of automated tools for parser construction.

EXPECTED PROFESSIONAL BEHAVIOR

To be fair, and to achieve high academic standards I require students to be honest and adhere to the following policies. These policies are meant to enhance student learning and ensure that your classmates

You are expected to behave in a way that is responsible and fosters a learning environment for your classmates.

1. **You may not use cell phones, lap tops or any other electronic devices in the class while the lecture is in session** If you are in the class, I expect you to participate in the discussions.
2. Only one person talks at a time in the class and that includes the instructor. If you need to ask or answer a question, please raise your hand.
3. Please come to classroom and lab session on time and please do not distract the lectures by talking among yourselves and or walking in and out of the class in the middle of the lectures. If any of these incidents occur repeatedly, you may be asked not to attend classes.
4. Please follow all instructions given in the classroom, such as participating in class, bringing books, getting printouts from blackboard etc.
5. You are expected to keep track of your grade at all times. If you see yourself failing, you should take necessary measures to improve your grade. There are no make-up exams or extra credit assignments given to students for improvement of grade. No In-completes will be assigned for the course except in extenuating circumstances.
6. If you need to reschedule a grading or midterm or final, please follow up with me as soon as possible after the event.
7. If you have two of final exams at the same time (one of them being this class, I will reschedule the final for you) or if you have four or more finals on the same day, I will reschedule the final for you. Under no other circumstances, will the final exam be rescheduled.

GRADING POLICIES

The grades for the course will be split among the following testing mechanisms.

Midterm -----25%

Short Programs --- 30%

Programming Projects – 20%

Final-----25 %

Curve: Each individual's grade will be adjusted upward (if needed) to make the class average of 80 at the end of the course. Class averages for individual quizzes or assignments or midterms will not be computed or provided. The class average will be computed on the overall grade only at the end of term and necessary points will be added if the average is below 80. Note also that the average is computed for grades over 45% only.

Letter grades will be assigned using the scale below once the curved grade is computed.

90- 100 Excellent (90 – 94 is A- and 95-100 is A)

80 -89 Above average(80 – 82 is B-, 83-86 is B, and 87-89 is B+)

70 – 79 Average (70-72 is C-, 73-76 is C and 77-79 is C+)

60- 69 Below Average (60- 64 is D, and 65-70 is D+)

< 60 is failing or F.

Short Programs

The list of homework problems will be available. You are expected to work on the

problems on a daily basis. Your homework will be due on **every** Fridays starting Week 2. On Friday, you will turn in the homework at the beginning of the class.

Projects : There will two to three programming projects.

Midterm and Final: Midterm will be around the sixth week and the final in the eleventh week. Final will include all the material taught from the beginning of the course.

Grading : *There will be a MINIMUM of one week between the time a material is submitted and the time the grades are returned back to you. Full credit will be given to correct solutions that meet all of the requirements. Partial solutions will receive partial credit. The amount of partial credit is up to the discretion of the grader.*

You are required to keep the returned graded material in a safe place until a grade is assigned for the course.

LATE SUBMISSION

All of the items including quizzes, assignments etc are due on the day it is posted/announced to be due. You are given TWO late COUPONS for the entire term. You may use each coupon to

1. turn in one programming assignment late by 24 hours, OR

When you are turning in the assignment on blackboard, let me know that you are using one of your coupons.

Note that if you do not use the coupon for the class, by the end of term, it cannot be refunded for grade!

YOU DO NOT NEED A COUPON FOR RETAKING MIDTERM OR FINAL EXAM.

PLAGAIRISM POLICY FOR THE CLASS

Submission of work not entirely your own, will receive an automatic zero, with a warning, for the first offense. An automatic failing grade will be assigned for the course for any subsequent offense. This is applicable to all parties involved in the cooperative effort. So please do not help others in assignments or tests. If you help someone to the point where both of you end up with essentially same assignment, then you are also equally guilty as the person(s) that got help from you. Documentation related to any incidence of cheating in assignments or tests will be forwarded to the Dean of Academic Affairs and will be added to the student's file.

ABSENCES

You are required to attend all the classes so that you perform well in the course.

If you miss a class it is your own responsibility to obtain lecture notes from your classmates. I will not go over the material over email or in person on individual basis nor provide lecture notes. You can meet me after class or during office hours for any clarification

If you cannot take the midterm or final for medical reasons please call me before hand, if possible. If you are unable to call before hand, you should talk to me about rescheduling the test as early as possible and alternate arrangements will be made. You may reschedule the tests only with proper documents from a medical professional.

COMMON STATEMENT : STUDENTS WITH DISABILITIES

Students need to register with Wellness Center every term they are enrolled in classes. To be assured of having services when they are needed, students should contact the Wellness Center during the first week of each term. Note that it is the student's responsibility to arrange accommodations with each professor.

http://www.kettering.edu/studentlife/docs/student_handbook.pdf (page 26)

<http://www.kettering.edu/registrar/docs/2011-12UndergraduateCatalog.pdf> (page 46)

COMMON STATEMENT : ETHICS AND INTEGRITY

Kettering University values academic honesty and integrity. Cheating, collusion, misconduct, fabrication, and plagiarism are serious offenses. Each student has a responsibility to understand, accept, and comply with the University's standards of academic conduct as set forth in our statement, "Ethics in the University," and "Academic Integrity" as well as policies established by individual professors.

http://www.kettering.edu/studentlife/docs/student_handbook.pdf (pages 40-42)

<http://www.kettering.edu/registrar/docs/2011-12UndergraduateCatalog.pdf> (page 26)

COMMON STATEMENT : ACADEMIC DISHONESTY

We believe fairness, openness, and intellectual honesty to be the keystones of our educational mission. We foster these qualities in all our endeavors and use all possible means to discourage dishonesty, in any form. All members of the Kettering community should report academic dishonesty to the appropriate faculty person, as well as to the Associate Provost for Student Life. Academic dishonesty prohibited at Kettering includes, but is not limited to, the following forms:

- **Cheating:** Intentionally using or attempting to use unauthorized materials, information, or study aids in any academic exercise.
- **Fabrication:** Intentional and/or unauthorized falsification or invention of any information or citation in an academic exercise.
- **Facilitating Academic Dishonesty:** Intentionally or knowingly helping or attempting to help another to engage in academic dishonesty in any form.

- **Plagiarism:** Intentionally or knowingly representing the words, ideas, or images of another as one's own in any academic exercise. Students found to have carried out any form of academic dishonesty are subject to the faculty member's scrutiny and sanctions, as well as Judicial Affairs' policies and procedures.

COMMON STATEMENT : HARASSMENT & DISCRIMINATION POLICIES

Kettering University expects all students, faculty, and staff to contribute to a productive learning environment by demonstrating behavior that neither interferes with another individual's performance nor creates an intimidating, offensive or hostile environment. The University will not tolerate harassment or discrimination in any forms, regardless of intent and/or the victim.