EECS 762: Programming Language Foundations I
Fall 2019

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Office hours:	WF 10:00 – 11:00 AM, and by appointment
Course website:	http://ittc.ku.edu/~garrett/eecs762f18/
Lectures:	MWF 9:00 – 9:50 AM, Learned Hall 1136

Description.   This course is an introduction to modern approaches to the semantics of programming languages. The course will introduce denotational, axiomatic, and operational approaches to defining the semantics of simple programming languages. It will also introduce the mathematical techniques necessary for using these approaches, including the study of domains and continuous functions and of proof systems and logics. Finally, we will discuss the λ-calculus, a simple model of computation that underlies modern functional programming languages, and its connections to logic and proof theory.

Textbook.   We will use Aaron Stump's *Programming Language Foundations* as the textbook for this course. The majority of the homework problems will be assigned from the textbook, so having a copy is highly recommended. Additional notes may be posted to the course webpage throughout the semester.

Homework.   There will be (roughly) 7 homework assignments in the course. Each will contain two sorts of problems. *Regular* problems will be less difficult, and will be graded with partial credit as usual. *Challenge* problems will be more difficult, and will not usually be given partial credit. I will provide minimal guidance on challenge problems, and only in response to specific and well-articulated queries. Regular and challenge problems will be considered separately in determining your final grade.

Homework is due at the start of class, and must be submitted via Blackboard. Homework must be typeset, not handwritten; you are likely to find LaTeX to be the most efficient tool for doing so. If you are unfamiliar with LaTeX, you may find the slides at http://web.mit.edu/rsi/www/pdfs/new-latex.pdf, including the list of recommended further resources at the end, to be of some help.

Extensions. Extensions are unlikely, and will be announced in class and on the course web page should they occur. *Late assignments will not be accepted.*

Exams.   There will be two exams, one in class on Wednesday, October 9th, and one in the university-assigned finals slot from 7:30-10:00 AM on Monday, December 16th. Exams will be held in the regular class room, and are closed book and closed notes.

Grading.   Grades will be assessed as follows. *This course will not use +/- grading in Fall 2018.*

Homework	70%		A	85–100%
Regular problems	50%		B	70–84%
Challenge problems	20%		C	55–69%
Exams	35%		D	45–55%
Midterm	15%		F	0–44%
Final	20%			

It is possible to receive an A in the course without attempting any of the challenge problems. However, it is extremely unlikely that you will be able to do so. If you want an A, therefore, you should tackle at least some of the challenge problems.

There is a small extra-credit cushion built into the challenge problems. There will not be other opportunities for extra credit.

Evaluating academic work is a necessarily imprecise discipline. I will adjust the thresholds down if I think that they are not accurately reflecting student accomplishment; I will not adjust thresholds up. You must receiving passing grades on *both the homework and the exams* to pass the course.

Honesty and academic misconduct. The work you submit in this course should be yours, and yours alone. You are encouraged to discuss course materials, including homework problems, with the other students in the class. However, you should only submit work that is entirely yours, and has not been derived from other sources or been shared with other students. Submitting work that is not yours is academic misconduct, and will result in receiving a score of 0 on the assignment or exam, and being reported to the chair of the department. You should be aware of the university's academic misconduct policies:
http://policy.ku.edu/governance/USRR#art2sect6.

There is an ever escalating arms race between the makers of automated systems for detecting cheating and the efforts of some students to get around them. I suggest that at this point it is probably easier to get passing grades honestly than dishonestly.

Accommodation procedure. The Academic Achievement and Access Center (AAAC) coordinates academic accommodations and services for all eligible KU students with disabilities. If you have a disability for which you wish to request accommodations and have not contacted the AAAC, please do so as soon as possible. They are located in 22 Strong Hall and can be reached at 785-864-4064 (V/TTY). Information about their services can be found at http://www.access.ku.edu. Please contact me privately in regard to your needs in this course.

Nondiscrimination. The University of Kansas prohibits discrimination on the basis of race, color, ethnicity, religion, sex, national origin, age, ancestry, disability, status as a veteran, sexual orientation, marital status, parental status, retaliation, gender identity, gender expression and genetic information in the University's programs and activities. Please contact the University's Title IX Coordinator at IOA@ku.edu with any inquiries.

Religious observances. Should the examination schedule for this course conflict with your mandated religious observance, please contact me at the *beginning* of the semester so that we can schedule a make-up exam at a mutually acceptable time. In addition, students will not be penalized for absence from regularly scheduled class activities which conflict with mandated religious observances. Students are responsible for initiating discussion with the instructor to reach a mutually acceptable solution.

Concealed Carry. Individuals who choose to carry concealed handguns are solely responsible to do so in a safe and secure manner in strict conformity with state and federal laws and KU weapons policy. Safety measures outlined in the KU weapons policy specify that a concealed handgun:

- Must be under the constant control of the carrier.

- Must be out of view, concealed either on the body of the carrier, or backpack, purse, or bag that remains under the constant control of the carrier.
- Must be in a holster that covers the trigger area and secures any external hammer in an un-cocked position
- Must have the safety on, and have no round in the chamber.

Instructors are allowed by Kansas Board of Regents policy, to require backpacks, purses and other bags be placed at the front of the room during exams, and as such those items will not be under the constant control of the individual. Students who choose to carry a concealed handgun in a purse, backpack, or bag must review and plan each day accordingly, and are responsible for making alternate arrangements as necessary. The university does not provide appropriate secured storage for concealed handguns.

Individuals who violate the KU weapons policy may be asked to leave campus with the weapon and may face disciplinary action under the appropriate university code of conduct.

Commercial Note-taking. Pursuant to the University of Kansas' Policy on Commercial Note-Taking Ventures, commercial note-taking is not permitted in EECS 762. Lecture notes and course materials may be taken for personal use, for the purpose of mastering the course material, and may not be sold to any person or entity in any form. Any student engaged in or contributing to the commercial exchange of notes or course materials will be subject to discipline, including academic misconduct charges, in accordance with University policy. Please note: note-taking provided by a student volunteer for a student with a disability, as a reasonable accommodation under the ADA, is not the same as commercial note-taking and is not covered under this policy.