

Syllabus

General Info

Course CS320 Topics in Software Development: Programming Languages

Instructor Charilaos Skiadas (skiadas at hanover dot edu)

Term Winter 2015-2016

Office SCH 121C

Office Hours MW 2pm-4pm, R 2pm-3pm, and by appointment.

Book Online resources

Websites for notes¹.

Class times MWRF 1pm-2pm in SCH120.

Course Description

This course will be an overview of various programming language concepts. Though we will consider two specific programming languages, we will use them as a springboard for the exploration of various design questions regarding programming languages. What is the difference between statically typed and dynamically typed languages? What does mutation offer and what are the drawbacks of introducing it in a language? What elements are essential and what parts are just syntactic conveniences? And so on.

Along the way we will learn two programming languages, OCAML and Racket. Both languages offer programming paradigms that will hopefully be new to you, and these new paradigms can enrich your programming experience in other languages as well. Along the way you will learn how to write clearer programs by regularly reviewing your classmates' code.

We will wrap up the term with a project. More details as the term progresses.

Course Components

Reading Notes

On the website you will find a schedule² with links to documents for each class day. In those documents you will find notes for the day's lesson, and reading assignments.

¹skiadas.github.io/ProgLangCourse/site/

²<http://skiadas.github.io/ProgLangCourse/site/schedule.html>

Class Attendance

You are expected to attend every class meeting, including labs. You are only allowed to miss 3 classes without excuse. From that point on, every unexcused absence will result in a reduction of your final score by one percentage point, up to a total of 5 points. Excused absences should be arranged in advance, and backed by appropriate documentation. Emergencies will be dealt with on an individual basis. There are very few reasons that would qualify as an excuse for an absence.

Programming Assignments

There will be regular programming assignments about once per week. You will be expected to submit both a solutions file and a test file. You should make sure to write sufficient tests to ensure your solutions behave as they should. Programming assignments are 30% of your final grade.

Exams

There will be one midterm on Friday, February 26th and a final during finals week. **You have to be here for the exams.** If you have conflicts with these days, let me know as soon as possible. Do not plan your vacation before you are aware of the finals schedule. In terms of your final grade, the exams you did better on will weigh more.

Programming Project

There will also be a larger programming project, that we will discuss in more detail later in the term. It will count for 30% of your final grade.

Getting Help

- You should never hesitate to ask me questions. I will never think any less of anyone for asking a question. Stop by my office hours or just email me your question, which has the great benefit of forcing you to write it down in clear terms, which often helps you understand it better.
- You are allowed, and in fact encouraged, to work together and help each other regarding the notes and the theory. You can also discuss general questions about the programming assignments. But I expect you to work on the programming assignments on your own.

Grading

Your final grade depends on class attendance, homework, project, quizzes, midterms and the final, as follows:

Component	Percent
Attendance	5%
Assignments	40%
Project	35%
Midterm	20%

This gives a number up to 100, which is then converted to a letter grade based roughly on the following correspondence:

Letter grade	Percentage Range
A, A-	90%-100%
B+, B, B-	80%-90%
C+, C, C-	70%-80%
D+, D, D-	60%-70%
F	0%-60%