

# CS 510 Principles of Programming Languages Syllabus

The syllabus below describes a recent offering of the course, but it may not be completely up to date. For current details about this course, please contact the course coordinator. Course coordinators are listed on the course listing for undergraduate courses and graduate courses.

## Text Books

### Required

Friedman, Wand, and Haynes , , 3rd ed., 2008, MIT Press

### Recommended

Daniel P. Friedman and Matthias Felleisen , , 4th ed., 1995, MIT Press

## Week-by-Week Schedule

Week	Topics Covered	Reading	Assignments
1	Introduction: Overview of the course - Introduction to Scheme - Basic concepts	LS ch 1 and 2 or online tutorial	Install DrScheme
2	Scheme: Data types and Procedures	LS ch 1 and 2 or online tutorial	
3	Programming Using Recursion	EOPL ch 1	hw1 due in 1 week
4	Mutually Recursive Procedures - Data Abstraction and Procedural Representation	EOPL ch 2 until 2.3	
5	The Lambda calculus: Data types - Concrete and Abstract Syntax	EOPL 2.4 and 2.5	
6	A Simple Interpreter: Conditional Evaluation and Local binding - The Language LET	EOPL 3.1 and 3.2	hw2 due in 2 weeks
7	A Simple Interpreter: Procedures - The Language PROC	EOPL 3.3	
8	A Simple Interpreter: Recursion - The Language LETREC	EOPL 3.4	
9	Store and Effects: Explicit Store	EOPL ch 4 until 4.2	hw3 in 2 weeks
10	Implicit Store	EOPL 4.3	
11	Parameter Passing: Call-by-value - Call-by-reference	EOPL 4.5	
12	Parameter Passing: Lazy Evaluation	EOPL 4.5	hw4 in 2 weeks
13	Type: Typed Languages - Type Checking - Type Inference	EOPL ch 7 until 7.4	
14	Review for Final Exam		