Course Syllabus

Week 1:
Overview of programming metaphors.
Curriculum planning.
Assignment 1: Tell a programming story

Week 2:
Overview of major languages. Pseudocode
Syntax, parsers, BNF, automata.
Assignment 1 due.

Week 3:
FORTRAN, subroutines, name space
ALGOL, hierarchy, blocks
Assignment 2: Pseudocode compiler

Week 4:
PASCAL, simplicity, data typing
Dynamic and static scoping, control structures.
Program semantics and pragmatic modeling
Assignment 3: Pseudocode emulator
4/18: Assignment 2 due

Week 5:
ADA, modularity, abstraction
packages, concurrency
Assignment 4: Semantic model
Assignment 3 due.

Week 6:
LISP, functional style, symbol processing, recursion, garbage collection
A small interpreted language.
Assignment 4 due.

Week 7:
PROLOG, declarative style
logical programming, pattern-matching
Assignment 5 (major):

Week 8:
Smalltalk and JAVA, object-oriented style
data abstraction and modularity, agents

Week 9:
Mathematica
modern and new techniques
Assignment 5 due

Week 10:
Closure.