CS251 Programming Languages **Handout # 2**
Prof. Lyn Turbak **January 30, 2001**
Wellesley College

Tentative Syllabus

The readings listed with a lecture cover (some) material in that lecture. You are encouraged to do the reading *before* the associated lecture.

Lec.	Date	Topic	Reading	Assignments
		Week 1		
1	Tue Jan 30	Administrivia; Course overview; Brief introduction to Scheme		PS0 out
2	Wed Jan 31	Scheme 1: functions, recursion, pairs, lists, list recursion	*SICP* 1.1–1.2	PS1 out
3	Fri Feb 02	Scheme 2: symbols, quotation; trees, tree recursion; data structures	*SICP* 2.1, 2.2–2.2.2, 2.3	PS0 "due"
		Week 2		
4	Tue Feb 06	Higher-Order Functions 1: first-class functions	*SICP* 1.3	
5	Wed Feb 07	Higher-Order Functions 2: compositional programming	*SICP* 2.2.3-2.2.4	
6	Fri Feb 09	Higher-Order Functions 3: all you need is λ.		PS1 due/PS2 out
		Week 3		
7	Tue Feb 13	Simple interpretation (INTEX)		
8	Wed Feb 14	Simple naming (BINDEX): scope, desugaring, substitution vs. environment model		
9	Fri Feb 16	Simple control (IBEX): dynamic vs. static typechecking; program transformation		PS2 due/PS3 out
		Week 4		
	Tue Feb 20	**Monday Schedule; no lecture**		
10	Wed Feb 21	Interpreting first-order functions (FOFL)		
11	Fri Feb 23	Data: sums, products, algebraic datatypes		PS3 due/PS4 out
		Week 5		
12	Tue Feb 27	Block structure (FOBS)		
13	Wed Feb 28	Interpreting higher-order functions (HOFL)	*SICP* 3.2–3.2.2; 4–4.2.2	
14	Fri Mar 02	Naming issues		PS4 due/Exam1 out
		Week 6		
15	Tue Mar 06	Typeful programming in ML	*MLWP* 5.12–5.20	
16	Wed Mar 07	Types 1: explicit monomorphic types, typing rules		
17	Fri Mar 09	Types 2: type checking		Exam1 due/PS5 out

Lec.	Date	Topic	Reading	Assignments
		Week 7		
18	Tue Mar 13	Types 3: monomorphic type inference		
	Wed Mar 14	**No Lecture**		
19	Fri Mar 16	Types 4: polymorphic types		PS5 due
	Mar 19 – 23	**Spring Break**		
		Week 8		
	Tue Mar 27	**No Lecture**		
20	Wed Mar 28	State 1: Imperative programming (HOIL)		PS6 out
21	Fri Mar 30	State 2: Environment model and state	*SICP* 3.2.3	
		Week 9		
22	Tue Apr 03	State 3: Parameter passing		
23	Wed Apr 04	State 4: C and Pascal		
24	Fri Apr 06	Haskell 1: Lazy functional programming	Hughes paper; *HCFP* 10, 17	PS6 due/PS7 out
		Week 10		
25	Tue Apr 10	Haskell 2: Monadic evaluation	Wadler paper; *HCFP* 18	
26	Wed Apr 11	Simulating laziness in eager languages		*SICP* 3.5, 4.2; *ML-WP* 5.12–5.20
27	Fri Apr 13	Control 1: Non-local exits		PS7 due/PS8 out
		Week 11		
28	Tue Apr 17	Control 2: Exceptions		
29	Wed Apr 18	Control 3: Continuations		
	Fri Apr 20	**No lecture**		PS8 due/Exam2 out
		Week 12		
30	Tue Apr 24	Non-deterministic computing	*SICP* 4.3	
31	Wed Apr 25	Logic Programming 1	*SICP* 4.4	
32	Fri Apr 27	Logic Programming 2		Exam2 due/PS9 out
		Week 13		
33	Tue May 01	Object-Oriented Programming 1		
	Wed May 02	**Ruhlman conferene; no lecture**		
34	Fri May 04	Object-Oriented Programming 2	*SICP* 2.4, 2.5	
		Week 14		
35	Tue May 08	Object-Oriented Programming 3		
36	Wed May 09	**(Last class)** CS231 Jeopardy!		PS9 due